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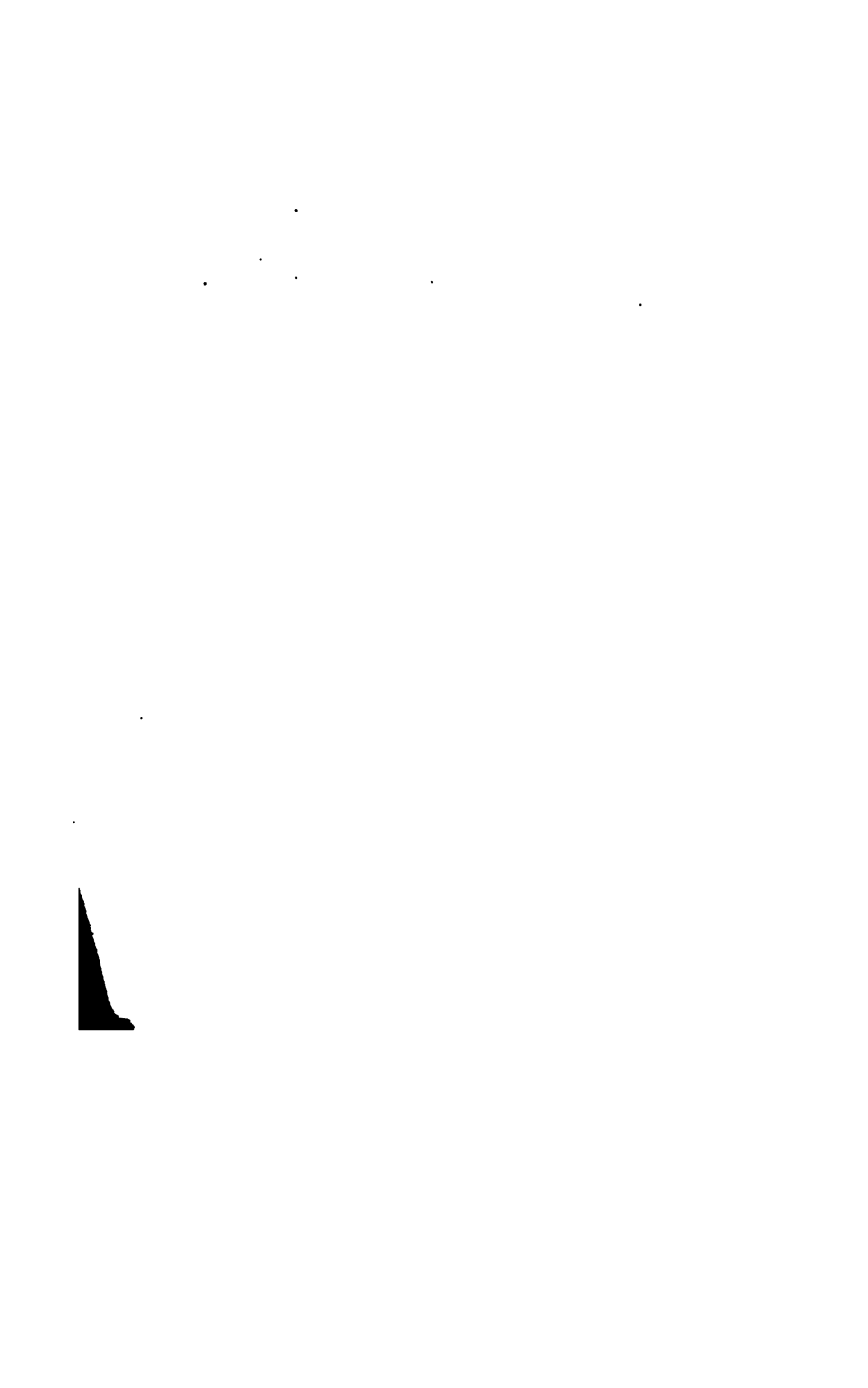
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AN ESSAY
ON THE
CULTIVATION OF THE INTELLECT
BY THE STUDY OF
DEAD LANGUAGES.

BY
WILLIAM SEWELL, M.A.

LONDON :
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COVENT GARDEN.

MDCCCXXX.

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TO

HARFORD JAMES JONES BRYDGES, Esq.

THE FOLLOWING PAGES

ARE VERY AFFECTIONATELY INSCRIBED

BY THE AUTHOR.

PREFACE..

THE following pages were originally intended as a preface to a little grammatical work. What, however, was at first a subordinate digression,—the enquiry into the operations of the intellect, gradually swelled into the principal subject, and appears at present under a very awkward form :—filled with digressions which sprung up naturally and necessarily as the sheets were written, and undivided into chapters, from my not anticipating the length to which they have extended. It is not a subject likely to attract many readers, but very likely to excite disapprobation in those who venture on it. I can only console myself against such

feeling, by the consciousness of having advanced nothing which, after a very long, and patient, and impartial observation of the workings of my own mind, undirected by books, and unbiassed by authority, does not seem to be true, and promise to be useful. It is in this hope that it is offered to the public, and they are the fittest judges of its errors or correctness.

ON
THE CULTIVATION
OF
THE INTELLECT.

If an ancient Persian were to rise from the dead, there is one feature above all others in the system of modern life, which would strike him with surprise and perplexity ; and, probably the majority of ourselves would be equally astonished at the fact, if we were not habituated to the sight of it. What is the meaning, he would ask, of devoting so much labour and time in the process of education, exclusively to the study of Latin and Greek ? If the object of education is to fit men for discharging with propriety the duties of their subsequent life, why compel them to consume the first twenty years of their age, in an endeavour, and in nine instances out of ten, a painful and futile endeavour, to acquire a

knowledge which gives them no practical information, which they throw aside the moment it is acquired, which, if pursued, would lead them far away from the business and interests of life ; and which sends them into the world ignorant of its commonest facts, and with all the main principles of conduct still wanting, and still to be supplied ?

At the present day we are beginning to put this question to ourselves, as it would be put by the old Persian, and as it has been put for years by every boy who has groaned under the discipline of the system. And till it has been answered satisfactorily, and the answer pressed home to the reason of every student, it is doubtful if we are justified in pursuing a paradoxical method ; and it is quite certain, that we shall have to encounter a spirit most opposed to improvement, in the opinion, whether groundless or not, that the object to be aimed at is valueless.

Now we should perhaps attribute too much to the wisdom of our ancestors, if we traced their adoption of our present system to any very profound metaphysical views. It appears rather to have been the result of circumstances ; and to have commenced at a time, when a knowledge of the dead languages was almost indispensable, from their em-

ployment in religion and in law; and from their exclusive possession of all that was excellent in literature. And we seem ourselves to have followed the steps of our forefathers more from habit, and want of thought, and dislike to innovation, than from a cool and deliberate conviction, that the path which they pursued, was the best. Still it is not impossible, that we have commenced by accident, and continued, without knowing it, the very best method of all to fulfil the objects of intellectual education. And the enquiry whether this has been the case, is one of sufficient importance to justify a minute examination. If we have erred in making the study of dead languages the main branch of our early instruction, let us substitute for it some other which will more fully answer our purpose. If we are right, let us adhere to our present system, nor be driven from it by the tendency of the age to calculate the utility of a pursuit solely by its immediate advantages. And if, though employing a proper instrument, we have failed hitherto to derive from it its maximum of utility, let us resolve at once to modify our method, and gain from it all the good of which it is evidently susceptible.

The solution, however, of this problem, important as it is in itself, will become more interesting, if we

strike at once to the bottom of the subject ; and, instead of contenting ourselves with vague, scattered, and general notions of the human understanding, endeavour fairly to ascertain with precision, the real nature of its operations, and the ultimate object of its faculties. To know whether an instrument is fitted to answer its purpose, we must find what that purpose is : and although in the resolute attempt to clear away the mists which have floated so long over all our speculations on the intellect, and to avoid the common error of substituting sounds for things, and playing with words as children play with counters, we may find many agreeable illusions disappear as we advance ; the recompense to all sober minds will be sufficiently great in the acquisition of solid truth, and the certainty of our subsequent proceedings. To discover that the figure which we deemed to be full of life, and instinct with motion, is but a mechanical automaton ; to see the clouds clear off from the side of a mountain, and leave nothing but a barren rock, these are painful disappointments to the fancy. But if the figure be an idol which we worship, it will be a good thing to break it in pieces, and lay bare the springs on which it moves. And if the mountain be land for cultivation, we

had better set actively to work on it, than sit down at a distance, in the belief that its sides are clothed already with verdure, and its soil spontaneously fertile. And of all the erroneous opinions which have laid waste the happiness of mankind, there is none more destructive and general, than that which has invested the operations of the intellect with a mysterious spirituality and life, and shown it to us through a veil, as an idol to its ignorant worshippers, till obscurity has heightened our veneration; and we gaze on it with a kind of stupid wonder, full of awe at its wildest caprices, and not daring to censure even the vices and mischiefs which it creates.

It is scarcely necessary at the present day to refute the principle so vaunted by the ancient philosophy, that the end of human life, or even of our intellectual powers, is the abstract contemplation of truth. And it may even be doubted whether the words are capable of bearing any precise and definite meaning. That the mind does feel a peculiar satisfaction in certainty, that is, in the absence of all hesitation and doubt, when connecting two ideas together, or to speak more philosophically, in passing from one state to another, is a fact confirmed by the experience of every mi-

nute. And this satisfaction is one of the simple and primary pleasures of our nature, which blends itself through innumerable combinations with the business and amusements of life. But that this feeling (and the pleasure resulting from the contemplation of truth, if the expression be accurately examined, can mean nothing else) should constitute our highest and ultimate happiness, is a position totally opposed to reason, experience, and revelation. It is essentially attached to an imperfection in our nature : first, because it cannot exist without previous ignorance ; and, secondly, because it results from a feature in our constitution, which differs from the attributes of the Deity, instead of resembling them ; since minds which think by a succession only of ideas, must be essentially different from one in which they are all co-existent. Again, it is faint and almost imperceptible, unless rendered acute, either by previous disappointment or anticipation, protracted to a certain length. But both these states of mind are states of uneasiness, and that happiness must be very imperfect, which, to be felt, must be preceded by pain. Moreover, if we consider that scarcely any pleasure is so transient, and requires to be so constantly renewed. by the stimulus of new discoveries : that the pro-

cess by which we arrive at these discoveries, though tempered with much that delights us, takes its rise originally in an uneasiness of mind, and is accompanied throughout with a painful impatience and restlessness ; that even this process, in the present state of the world, is open to very few minds, whereas the ultimate happiness of man must be universally accessible to all, and probably be the same in this world as it will be in the next ; that it is fully attainable in one class only of Truths, which occupy but a very small space in our field of enquiry, which are totally abstracted from our business and our bosoms, and are all of them resolvable into identical expressions ; and that a superior Being, to whom all the possible relations of things are already developed, must compassionate us as much when we cry out with rapture at discovering that the square of the hypotenuse is equal to the squares of the two sides, as we should look with pity upon an emmet, triumphantly exclaiming, that the straw on which it crawled, was hollow ; if, I say, we take these and other considerations of the same kind, together, it will be very difficult to believe that our supreme happiness can consist in what is called the contemplation of truth.

Much less, however, can it consist in the investigation of truth ; a process imperfect in itself, dependent in ten thousand ways upon accidents beyond our controul, and essentially combined with uneasiness and pain. And if the exercise of our intellectual powers is thus incapable of supplying us with an ultimate object of action, they must be considered solely and entirely in the light of instruments ; of instruments which assist us but little, if at all, in the attainment of our genuine happiness ; and whose principal utility consists in ministering to our animal wants : and this consideration may serve to diminish our dangerous and excessive admiration of them, and make us visit, with greater severity, the abuses of which they are capable.

If, then, our intellectual powers are merely instruments, and their use is in action, and all action is directed to the attainment of some object through certain means, the proper employment of the understanding will consist in the production of effects from causes ; and the most perfect intellect will be one, which, in perceiving an end, perceives at once all the means of its attainment.

Now, as it is at length quite certain that we know of no internal efficacy in a cause to produce

an effect; that we can perceive in them nothing but two facts of which the one invariably follows the other; and that without experience we never could anticipate the consequent from the antecedent, it is evident that all our prospective reasonings, must be repetitions of previous observations, and that in producing an effect, unless in cases of chance and instinct, we always retrace a chain of ideas, through which we have previously arrived at a similar result.

Four questions, then, naturally arise respecting the management of the intellect.

I. How are we to acquire these trains of ideas?

II. How are we to arrange them?

III. By what means may we blend and dovetail them into each other, so that one may drag the rest after it?

IV. How can we contrive to have them always at command, when wanted?

To use a common illustration, the farmer who wishes to carry his corn to market, must possess both a cart and a horse. Not only this, but to make them serviceable, he must put the horse first and the cart next. Not only this, but he must fasten the horse into the cart; and not only this, but he must have the key of the stable to get at them whenever he

chooses. These are four distinct requisites, and the omission of any one, will render all the others nugatory and futile.

First, then, how are we to acquire those trains of ideas, which, the moment an effect is required, will supply us the means of producing it?

Evidently in two ways, either by our own experience, or the observations of others: and the observations of others we likewise obtain in two ways, either by oral communication, or by reading. Of these the former would be infinitely the better if it did not demand such a multitude of superior minds, and such a sacrifice of labour and time. Information conveyed by sounds, assisted by gestures and intonations of the voice, arrests the attention much more than mere written symbols. The external circumstances of a conversation, the place where it occurred, the persons who were present, and all the peculiarities of the occasion and locality, are in general associated with it, and recall it to our minds. The little effervescence of animal spirits with which it is usually accompanied tends also to fix it in our thoughts; and it is a still more important consideration, that we are enabled by this mode of instruction to guard, and qualify, and explain: to excite the curiosity, to lead the en-

quiry, to remove all excuse for inattention by the opportunity of satisfying doubt and clearing difficulties; and to grasp and vary the position of our truths according to the diversity of characters, so as at all times to throw their whole concentrated light full upon the mind of the student. The acquisition, however, of ideas through this channel, must depend on the skill and knowledge of the instructor; and the only practical rules which can be given for ourselves, are, that we converse much, frequently, and with a variety of persons; as young men, in the mode of enquiry rather than assertion, and with a careful selection of our topics with reference to the situation of the hearer. It is wonderful how much knowledge we lose by indolently or proudly declining to converse with every man on the subject with which he is familiar: with the shepherd upon sheep, with the lawyer upon law, and with the soldier upon war.

With respect to the attainment of knowledge through the medium of books, the following hints, though obvious and common may still be useful.

I. Never, except with a view to amusement, to read for the sole sake of reading; but to solve some question which we have previously started ourselves.

II. To confine our attention to those parts of the work which throw light upon our difficulty; and thus to acquire a habit of glancing rapidly over books, fixing almost intuitively on the points which we wish to observe, and rejecting all that are unimportant.

III. To ascertain, by means of the indices and title pages, the contents of as many books as possible; that whenever we have a question to be solved, we may know immediately where to search for our materials.

IV. Never to search in books for information which lies within our reach, unless to discover it ourselves would demand too much time, or we have been unsuccessful in the attempt.

V. To bring as many opinions and works as possible to bear upon the subject which we are studying;—and

VI. To employ the materials collected by others rather as springs to assist, direct, and call up our own trains of thought, than as positions which it is our business to maintain, and heresy to doubt.

Since, however, in obtaining information from others it is necessary to be cautious in its recep-

tion, as we have here two fallacies to guard against, an error in perception and an error in statement, the following principles may not be useless.

Human belief, as distinct from consciousness, is nothing but the absence of all hesitation in passing connectedly from one idea or one state of mind to another, or in associating them together. Upon the principle of all other associations, it grows stronger with every repetition, and fainter with every interruption; and precisely in proportion to the number of interruptions, is, what we call the likelihood, probability, possibility, contingency, or certainty of a fact; words which by an unfortunate analogy we frequently apply in reasoning to the facts themselves, though they indicate and can indicate nothing but the state of our minds when anticipating them. A child who feels pain at putting his hand into the fire, the next time that a fire presents itself, will instinctively, mechanically, and involuntarily, find the feeling of pain recur to him. If, on touching the fire again, he found his expectation disappointed, the tendency of the feeling to recur would be considerably weakened. And if at every subsequent application no sensation of heat was produced, the association would gradually be destroyed. The connection in his

mind between heat and fire would be cut off; and he would undoubtedly believe that fire was not hot. At present, however, no one ever hesitates to assert the contrary; because in no single instance have we found that our anticipation of a peculiar feeling from that fluid, red, fluctuating substance, which we call fire, has been ever disappointed. And as thus we instinctively connect ideas which have always recurred in connexion, but which are perfectly different from each other; so we do this even with more certainty in the case of identical propositions; where the two states of mind produced by the subject and the predicate, are either precisely the same, or the second is a part of the first. That a stone will always fall to the ground, and that snow will always be cold, we believe most firmly; because we have never found a case in which the association has been broken. Still the falling to the ground, and the stone, the feeling of cold, and the idea of snow, are two states of mind perfectly different; and it is very possible for us to conceive cases in which the suspension of a law of nature might produce a totally distinct succession of ideas. The laws of nature are in fact nothing but general expressions for the order in which our ideas occur to us when presented by

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external objects. This order is perfectly arbitrary. We expect its recurrence from the same law of mind which gives force and energy to habit; but we have no reason whatever to assert such an uninterrupted recurrence, except from the *a priori* argument of the benevolence of the Deity. And we can easily break the links apart, and conceive one consequent of an antecedent to be substituted for another; the life of a man to follow on his taking arsenic, as well as his death; though our own natural and mechanical instincts of pain prevent us from acting as if such a disturbance was probable. But in all cases which admit of demonstration, though in general it is true that our belief is invariable, because our experience has been universal; and a child, in all probability, believes that things equal to the same are equal to one another; not because he perceives it to be an identical proposition, but because he has found it to be the case in every instance of trial; still there is something beyond a mere unhesitating belief; and we not only do not break the connection between the two terms of the proposition; but make what effort we choose, we find the thing is impossible. We cannot believe, or even imagine, that the same thing should be and not be; that a straight line

should be crooked, or that man should not be a rational animal. And how is this? Simply because the moment that we show the second term of the proposition to indicate either the whole or a part of the first; that moment the two states of mind lapse into one. That little verbal copula which has given rise to such logical errors, never indicates any thing else but the place which the ideas occupy in the order of our thoughts. The whole proposition becomes one state of mind. Out of one state of mind we cannot produce two; and though the Irishman thought himself justified in bidding an individual disperse, we cannot, at least in our mental operations, disconnect what was never connected. And if we go still farther into the question, the cause of this indisputable certainty in all cases of demonstration, is, the natural constitution of our minds, which does not admit of their being in more than one state at the same time. But it is so completely the effect of our physical organization, that however absurd it may seem, and necessarily must seem, still a wise man, who looks abroad into the Universe, and dares not assume without grounds that all other created beings are formed like himself; such a man will hesitate to assert that there may not be states of

existence in which the same thing may be, and not be, though he cannot conceive its possibility.

Such, then, is the nature of human belief ; and whenever a man brings us a proposition either apparently or demonstrably identical ; whenever a logician infers that the notion C is included in the word A, because all the world have agreed to include C in B, and B in A. Whenever a mathematician, by the assistance of his postulates, (and without them he could do nothing) constructs a case which is included in a prior, and includes a subsequent one ; or an accountant maintains that two are contained in six, because two are contained in four and four in six ; in all these instances, where the foundations of our reasonings are arbitrary hypotheses, if we can be brought to perceive the connexion, the belief is certain, the association indissoluble, and the whole evidence resolvable into our internal consciousness.

Again, whenever statements are made which I can prove by the evidence of my senses ; when I hear it asserted that this milk is white, that the day is cold, that a friend is before me ; if all the ideas associated with these words are actually called up in my mind, and particularly that muscular sensation, from which we chiefly infer an external material

world, I have no hesitation in believing a statement thus made, to be true. It is true as far as my own sensations go ; for Truth is nothing but the absence of all interruption in our connected chains of ideas. A true note is that which corresponds with our anticipations ; a false step is one which disappoints them. A true copy is one in which the two trains of ideas respectively called up by the two objects compared, are precisely the same. A false statement is one which excites expectations only to disappoint them. And precisely in proportion to the number of different or corresponding ideas, when comparing a newly acquired chain with one of the same kind, previously formed, do we judge of its likelihood, its probability, its verisimilitude, or its falsity ? Here again the evidence of the senses is resolvable into consciousness ; I am conscious of these ideas and sensations which the assertions induced me to expect. They are conveyed to my mind by the senses, and I cannot hesitate in passing readily through them.

There is a third case in which we have to receive the testimony of others : where neither demonstration is possible, nor the confirmation of our own senses at hand. And here four principles may be laid down : 1st. That the presumption is always in favour of

Truth. It is so, because falsehood is as difficult as it is unnatural, and as painful as it is difficult. No man tells a lie without shame; no man can do it without breaking through a long established habit, without anxiously and carefully separating his real state of mind from the words which have always been associated with it. No art and no effort can keep this up through a long and complicated fiction. The mind, in some incautious moment, will slip out of this artificial restraint; and as to break the association is more difficult where the connexion has been the strongest, a lie will be no where so difficult to maintain, and so repugnant to our feelings, as when we are speaking at length of ourselves, our own conduct, and particularly our own sensations. It is easy to invent fictions for others, and not so difficult perhaps to represent ourselves in false situations. But to feign consistent sensations for ourselves is of all others the hardest task: and this might be thrown out to those who with all their ingenuity have been able to trace in the records of Christianity nothing but a few apparent historical inconsistencies, and not a single mistake against nature or the human heart.

The second principle is this: That any statement not absolutely contradictory, if it be totally

detached from all practical interest, and we have no means of positively refuting it, should enjoy the benefit of a doubt. We are not obliged to assert—but neither are we forced to deny. So many facts are daily ascertained to be true, against which, at their first publication the whole common sense, or to use, instead of the word, common sense, what it frequently signifies, the whole ignorance and prejudice of the world indignantly revolted, that we may well and wisely pause before we stamp, as falsehood, even the most miraculous and inexplicable mysteries, and we may even go so far as to assert, that, knowing our incapacity of believing a contradictory proposition to lie solely in the constitution of our minds, that such constitution may not be universal, and that it justifies no inference whatever to the real nature of things; we may perhaps go so far as to say, that even a contradictory statement respecting another world, and revealed through a competent authority, though it could not command our assent, ought not to be imperatively rejected. Such a suspension of our judgment, however ridiculous it may seem, might perhaps be a reasonable submission to the consciousness of our own imperfection. And without either expecting it to be made, or asserting that it is required, it may

perhaps be useful to ask ourselves, whether such an hypothesis being granted, we should in this manner exercise, not a blind and fanatical faith, but a sound and discriminating philosophy.

A third principle is the following.

When a statement is made by another which we can neither prove nor disprove; supposing it to be of such a nature that our belief in it would ensure our happiness, and that we could in no possible way be injured by its acception: it would surely be great wisdom not to attempt a positive proof where such a proof is impossible, (and we have seen that it is so, in all cases except in identical propositions and objects of sense) but to do all in our power to facilitate our belief, to let the connexion of the associations run on so constantly, and to reject all hesitation and suspicion so peremptorily, that, in a short time, the belief would be perfect without any proof at all; precisely in the same manner as two notes of music, or any other two successive states of mind, however distinct and difficult to amalgamate at first, by constant repetition fall mechanically one into the other.

It is not the intention of the present enquiry to touch even incidentally on religion, and perhaps those are more injurious to its cause, who obtrude it upon every occasion, than those who neglect its

enforcement. But in the present instance no other illustration is perfect. Suppose then all the facts of Christianity, and all the doctrines built upon them to be perfectly false; as it is certainly possible, that is, conceivable, that they may be, since they are neither of them contained in identical propositions; and the facts are placed by their antiquity far beyond the evidence of our senses, nor even if we had been present at them could we have been convinced of their reality, beyond the possibility of a doubt. (For there is no man acquainted with the real nature of our senses and their connexion with the mind, who may not at times bring himself to hesitate as to the validity of their testimony. We cannot demonstrate the existence of an external world; and we may consequently deny if we choose the reality of any thing which occurs there.) Supposing, then, that by any miraculous dispensation, we could be made to know the falsity of Christianity: and that with this knowledge firmly impressed, we should then discover with mathematical certainty, that, notwithstanding its falsity, it was a system perfectly calculated to make us happy; that no other system was so calculated, and that in abandoning our belief we abandoned ourselves to uneasiness and misery; I know not what philosophy might

affect, but I know what a rational man would do, and what every law of nature would instinctively and ultimately compel. We should cling to our belief; we should never dare to contemplate as an illusion, what was absolutely necessary to our happiness; we should struggle to maintain the deceit; and there is no doubt that by constant exertion we should succeed in laying all our misgivings, and delude ourselves into a certainty of its truth. Now this is putting a case in which we should have to struggle against a very natural pain; that pain which made Socrates consider, an error of opinion to be one of the greatest evils in life. Suppose however a case, and it is one which actually exists, that we have no conviction that Christianity is false; and only no conviction, no certain mathematical proof of its truth; suppose then it is shewn that in the present constitution of our minds, such a proof is absolutely and physically impossible, as impossible as that the same thing should be and not be at the same time, that it presumes in fact the truth of two contradictory propositions; on this hypothesis, without looking to any kind of evidence, is there any principle in our own nature which ought rationally and soberly to bias and direct our belief? There

assuredly is,—that law of our mind, to which we shall never do justice, till we have made it the rule of our conduct, the criterion of morals; and the test of religion. That law which binds us under an instinctive obligation to pursue our own purest, and highest, and ultimate happiness. If with all the springs of the human mind before us, and all their complications developed, we could prove with mathematical certainty, as Newton proved the laws of optics, that our highest good must lie, not in the belief, but in the rejection of Christianity, and if this could be the deliberate conclusion of men, all of whose pleasures were perfectly pure, natural, and unadulterated, there can be no hesitation in affirming, that we should be morally and reasonably justified not in pronouncing it to be false, but at least in suspending our assent. Nature herself has laid us under one paramount law, and we cannot and ought not to escape from it. Put then the argument to the other side and what is the result? Prove to men, not by vague and empty declarations, which, where the heart speaks, are not required, and where there is no heart, are perfectly futile, that Christianity, and Christianity, with all its doctrines and difficulties and mysteries is not a mere system of facts and principles, not a bare revelation of things which must otherwise

have been hid from us, not simply a development of truths, or a publication of moral laws, but a scheme most wonderfully and artfully contrived for giving to man, in this world, the highest happiness of which his nature is capable; a scheme so organized, that the detraction of a single point would destroy the whole of its effect; and so perfect and complete, that if a philosopher had been called on, with a consummate acquaintance with our nature, to contrive a system for its permanent happiness, such a system must have been Christianity. Prove this rigidly and demonstratively from the laws of mind, as conclusions are proved in the mechanical sciences from the laws of matter. Shew that this happiness depends solely and entirely on the belief, and not on the reality of the Gospel; that if there be no God, and no Saviour, and no hereafter, if the Bible be a perfect fiction from beginning to end, still we are in no wise relieved from our reasonable obligation to receive it. Prove this, as it may be proved without lurking under a single sophistry, or missing a single link in the chain of argument, and we shall do more for the cause of Christianity, with a proud and suspicious philosophy, than if we called down fire on it from Heaven, or raised up the dead before its eyes. And till this be done clearly, and

decisively, and unanswerably, we may be perfectly assured, that as the heat increases as the sun rises, so as knowledge is extended, scepticism will extend likewise. It is the only remedy which we can apply to a bold and scrutinizing reason, waking every day into a jealousy of restraint and a suspicion of error; confusing, in the twilight of its knowledge, old and bad opinions with opinions conceived to be bad simply because they are old; and fed with the triumph of freedom and that intellectual pleasure, which, from its very proximity in intenseness to the peculiar satisfaction of religion, is of all others the most dangerous to indulge, and the most apt to slide in as a substitute. To apply to such minds as these our every-day evidences of Christianity is perfectly useless; you overwhelm them with authority; they reject it with disdain: you trace up the traditions of your records; those records they have never examined; you point to prophecies and miracles as unanswerable arguments; and but little ingenuity is required on a careless and uninterested survey to assign explanations of the phenomena, or confound them with detected impostures. The internal consistency of the scheme, its more delicate features of authenticity, they have neither time nor inclination to

have been hid from us, not simply a development of truths, or a publication of moral laws, but a scheme most wonderfully and artfully contrived for giving to man, in this world, the highest happiness of which his nature is capable; a scheme so organized, that the detraction of a single point would destroy the whole of its effect; and so perfect and complete, that if a philosopher had been called on, with a consummate acquaintance with our nature, to contrive a system for its permanent happiness, such a system must have been Christianity. Prove this rigidly and demonstratively from the laws of mind, as conclusions are proved in the mechanical sciences from the laws of matter. Shew that this happiness depends solely and entirely on the belief, and not on the reality of the Gospel; that if there be no God, and no Saviour, and no hereafter, if the Bible be a perfect fiction from beginning to end, still we are in no wise relieved from our reasonable obligation to receive it. Prove this, as it may be proved without lurking under a single sophistry, or missing a single link in the chain of argument, and we shall do more for the cause of Christianity, with a bold and suspicious philosophy, than if we called on it from Heaven, or raised up the dead to attest its truth. And till this be done clearly, and

being persuaded, than to apply them where they always must fail to produce that desire at first, are serious and important considerations. To pursue them, however farther, would be to wander from our present enquiry; and nothing but their magnitude can excuse the length of the present illustration.

A fourth principle to guide us in the reception of evidence is a modification of the last; and is applicable in cases where we are called on not to encourage our belief, but to act on the information of others without the means of ascertaining the fact, or weighing the testimony. And here too our natural instinctive prudence decides for us at once by a comparison of consequences. An anonymous letter informs me that by searching in a particular spot I shall discover a considerable treasure. I gain much if it be true, and lose nothing but a trifling labour if it be false. I should assuredly make the attempt. I am told that a river is not fordable. By remaining where I am I incur a delay: by attempting to cross I risk my life. It would be folly to hesitate a moment. The same principle has been applied with great justice and sense to religion: act upon the statements of Christianity; for if they are false, you lose nothing,

and if true, to receive them is an infinite good, and to reject them an inexpressible evil. The argument, however, is addressed, not to our intellect, but to our hopes and fears; and it is therefore unfit to be urged to a reasoning philosopher, though it is used every day in common life; and admirably adapted to all who are too ignorant to be sophists, and not too proud to acknowledge timidity.

The last case which we have to consider is where we enjoy the opportunity of examining the information received. And this we do in three ways, by observing:—

I. The nature of the fact.

II. The capacity of the relator.

III. The fidelity of his account.

Of the first it may be useful to remark that it ought to weigh but little in the scale when separated entirely from the rest. We receive facts with ease upon testimony, when they seem to us probable or likely. If a friend assures me that he met a horse in the street, I believe him at once. If he tells me he encountered a crocodile, I am strongly inclined to incredulity. But let us not infer from the bias of our own perceptions any positive quality in the object. Let us not assume that a face is distorted because reflected from a

magnifying mirror. A fact to us is probable when it corresponds with our expectations, or gratifies our wishes; and likely when it seems to coincide with the order of our former experience. As to that secondary sense of the words, in which they are usually employed to signify what it is difficult to explain, some intrinsic quality or attribute in the facts themselves, the whole notion is a delusion. In this sense it is not at all more probable, or more likely, or more natural, that fire should burn than freeze; that a stone should fall to the ground than remain in the air; that a medicine should cure a disorder, than that a word should raise the dead. Our belief in the stability of nature is an instinctive result of the law of association; not a truth implanted in us by our Creator, and consequently not to be disputed. And when we come to reason on the subject, we can only say, that the Being who formed us must be benevolent. That to disturb perpetually the associations of experience, would be productive of infinite misery; and that therefore it would seem to be at variance with the rest of his attributes and dealings, if he suffered that order to be broken except for a benevolent purpose. And nothing can indicate more strongly a weak and a narrow mind, than to judge

the existence of a fact simply by its effect upon our feelings ; or to limit the contingencies of events, and the possible combinations of nature, by our own petty sphere of observation. Ignorance is always incredulous, and knowledge always fearful of pronouncing a fact or phenomenon to be false.

II. The capacity of the narrator is also a very secondary point.

Principles received from authority we always may, and always should, endeavour to ascertain for ourselves; and there are few men so deficient in natural sagacity as to be deceived in their perception of facts, when no carelessness or hallucination can be charged to them.

The general mistake which is made in this point, lies usually with the hearer, and not with the narrator. We conceive his testimony to extend much farther than it possibly can. When I listen to the account of an apparition, or the history of a miracle, all that I have any right to infer is, that at such a time the mind of the spectator was affected in such and such a manner. The actual existence of the fact is a gratuitous and unwarranted assumption. If my own senses had conveyed me the perceptions described, I should have

no right to make the deduction, except from a *priori* probability. And to deny that the mind of another has ever been affected in a way which we have not experienced ourselves, is as wise as for a blind man to deny the existence of colours or light. Carelessness, indeed, is not uncommonly to be guarded against in testimony; but the more singular the fact the less it is to be dreaded. Men are not apt to be negligent or indifferent where their attention and wonder is roused. Minor and accidental circumstances will in this case be naturally overlooked; and an error in these points is even a confirmation of reality in the others. If Macbeth had felt what he professed to feel on seeing the corpse of Duncan, he would never have observed with such accuracy all the petty minutiae of his description:—

Here lay Duncan;
His silver skin laced with his golden blood,
And his gashed stabs looked like a breach in nature
For ruin's wasteful entrance: there the murderers
Steeped in the colours of their trade; their daggers
Unmannerly breech'd with gore.

But the main and important features of the case will almost always be correct; and a mistake in one not essential, or a difference in quantity and degree, will in general be the extent of the error.

Falstaff's exaggerations and accuracy in detail, are an admirable exemplification of these obvious principles.

It is however no uncommon occurrence to stigmatize as a mental delusion any singular or unaccountable perception. It is very easy to do so, and extremely satisfactory to our own vanity ; but here also a wise man will pause. He will limit the testimony solely to the sensations described. He will remember that the organs of perception, in all their minuteness and delicacy, are still not often deranged ; that there is a wide difference between that state of mind, in which, as in sleep and insanity, pre-existent trains of association seem to run confusedly and wildly into ideas produced immediately by disorder in our physical functions, and that state in which our mere animal impressions are scarcely felt, and the mind is all awake, with its senses ready at hand to join mutually in the detection of fallacies. And when the truth of principles is the question, he will guard against the vulgar presumption of estimating another's sobriety by his own insensibility and coldness ; of stamping as enthusiasm and folly all the beautiful poetry of our nature ; and ridiculing as madness that instinctive wisdom of the heart which never leads us

wrong, or misses its end ; but blends our interests, our affections, and our duties into one grand and indissoluble whole.

The examination of evidence by the moral character of the witness is the last point to be considered. From what has been already observed, it is impossible for any one to assert a deliberate falsehood, without acting mechanically from habit, or being swayed by some interested motive, and a motive sufficiently strong to overpower the first instincts of nature. As falsehood, therefore, is improbable in itself, and unnatural : this difficulty may, at any rate, be brought to weigh against a certain degree of improbability in the fact ; and when we can discover no motive, it should leave our belief unbiassed. Again, the motive we choose to assign, should be open and palpable, not fictitious or petty. We have a deviation from nature to account for ; and the cause which we assign, must be adequate to the effect. The interests, moreover, at stake, ought accurately to be weighed and compared. The interest of life is paramount to all others : a man, therefore, who dies in confirmation of his assertion, is entitled to unhesitating confidence. The chances of detection, also, tend to nullify an object ; and that object must be a great,

certain, and permanent good, not a mere creation of caprice, or the indulgence of a fluctuating passion, to produce a steady and constant adherence to a fiction, through any length of time, or any great variety of circumstances. And hence the moral impossibility of protracting even self-delusion beyond a certain point, since the effort will not be made, when the object ceases to charm : a bad object is perpetually varying ; and a good one seldom leads to deceit.

Lastly, since testimony may be conveyed, not only through a single individual, but simultaneously, by many ; or, consecutively, through a series of traditions, we have only to remember, that in the former case an agreement in essentials, and a slight variation in circumstances, is the most perfect test of practical truth, which human nature is capable of receiving. It is better than the evidence of our senses, since there we have only one witness, with the chance of a mental delusion ; and here we have many at once, without any sign of conspiracy. And the real authority of such testimony is not the least diminished in comparison, by the fact, that our belief in our senses is much more unhesitating and certain ; if, indeed, that belief we have shewn to be nothing but the mechanical effect of a physical alteration in

our organs. So, also, in the second case, even where the accounts which we receive are all of them copied and borrowed, though the accidental features will vary at each transmission, still the main fact, at every stage, will acquire an additional sanction, since the more generations assent to it, the more close must be its conformity to nature. And if this second criterion of truth be added to the former, and that again to individual testimony, we undoubtedly possess, in the combination, the nearest approach to moral demonstration, the most satisfactory evidence for matters of fact, not only which man can procure, but which man, in his present constitution, can possibly conceive to exist. Give us the human mind, framed as it is, (and why not differently framed, is no concern of ours) and bid us, without working a miracle, to change its nature, convey to it a belief in certain actual occurrences, the method we should undoubtedly choose would be the one which has here been described. Our propositions are not identical, and we cannot demonstrate them. If addressed to the senses, those senses are fallacious in themselves, and can only be kept in correction by appealing to the senses of others. The reality, indeed, of a thing, is nothing to us, but the belief, that it acts on the

minds of others precisely as it acts upon our own. It is thus that a single sense supports itself by appeals to the rest; and the unanimous agreement of them all, still requires the confirmation of our neighbour. The dagger of Macbeth was not real, for though the eye saw it, to the hand it was impalpable. So the vision which I see, is not real, for no other person perceives it; and the beauty which I admire, is not real, for to others it is just the reverse. The reality, then, of a fact, its actual external occurrence cannot possibly be inferred from our senses: without testimony, it cannot be proved. The more numerous the witnesses, the better the proof; and the longer the sufficiency of the proof, and the internal probability of the fact, has been confirmed by the agreement of men, the nearer does our evidence approach to full and satisfactory perfection. Add to this, the disinterested testimony of living and competent men; competent to form an opinion upon the accuracy of statements and deductions which we have not time to examine. Set against the want of what is vulgarly called ocular demonstration, but which is no demonstration at all, experience of the working of a system, and the general agreement of mankind, and let us ask ourselves whether, at this day, we are not philoso-

phically possessed of more and better evidences of Christianity, than those who saw its miracles performed, or even the persons who wrought them. One thing only, is wanting : our intellectual evidence is perfect ; complete, without any possibility of improvement : but the evidence which reaches the heart, the only evidence on which we act, that full and mathematical proof that our happiness is involved in our belief, though unconsciously every day it works on the poor and the ignorant, for the philosopher has never been developed. Let us do this, as assuredly it may be done, and we shall close up every avenue to unbelief. If our truest and purest happiness lies in the belief of Christianity, and our happiness is nothing but a continuation of our pleasures, and we naturally and necessarily follow whatever contributes to our pleasures ; the faith of every man will be shewn to be the test of his moral disposition : and even till this proof has been made out, let us guard against a common delusion ; let us not affect to excuse the deficiency of our evidence by referring to a state of probation, or appealing to our every day prudence, but boldly and peremptorily declare, that we have not merely sufficient proof, but the whole, and best, and only proof, which we could have ; that

there is no excuse whatever for incredulity or doubt: that God has done for man all that man could have imagined for himself, and that He who has provided for our bodies with such lavish and elaborate profusion, has not left a want unsupplied, when working for the salvation of our souls.

Such appear to be a few simple principles to regulate our reception of testimony. If they seem to encourage a hasty credulity, we should remember that there is a wide difference between assenting to a fact, and suspending our dissent; that our own experience may safely satisfy us of the truth of an account, but our want of experience cannot be brought to prove its falsity; that the impression made by a statement on our own minds is in no way the test of its truth: and that when we profess to reject a proposition, or to hesitate in receiving it, because it is improbable, we only say, in other words, that we do not like to believe, because we do not like it. The probability is a state of mind, not a quality in the fact; and thus it is, that the reception of any opinion, or of any matters of fact, which are beyond the reach of consciousness, must depend upon our inclinations, and must be the criterion of their nature. When we are called upon to act, we must be guided by calculations of

interest, founded on the accordance of present assertions with former experiences : but, where no action is required, it is always safe to observe a neutrality, and wise to doubt the extent of our own knowledge.

Before proceeding to investigate those intellectual operations, by which we collect ideas for ourselves, it need not be stated, that, as far as the intellect is concerned, they are of infinitely greater importance than any other ; and that too often they are sadly neglected in the process of early education. It is by excellence here, that we are enabled to augment the stores of human knowledge ; and it is here that we generally look for indications of superior powers. And because regulations for attaining it have been so seldom systematically enforced, we find it extremely rare, and wonder at it as a natural phenomenon ; though, in all probability, nature has fitted us all for its acquirement, while early accidental associations have developed it only in few.

The problem then to be solved, is this : How do we discover ourselves the cause of an effect ? By two ways : one, by observing the cause followed by the effect ;—the other, by observing the effect, and then searching out the cause. We administer

arsenic, and a man dies : here is an effect ascertained from a cause known. A man dies suddenly, without any visible cause : we must endeavour to find out that cause by a peculiar process. The first way has been vaguely termed *synthetical* ; the second, *analytical reasoning* : but the expressions are extremely ambiguous, and have thrown great confusion on the subject.

The first kind of discovery, we make in three ways.

I. By accident.

II. By enquiry, without any particular end.

III. By experiments, founded on conjecture or hypothesis.

The healing properties of many medicinal springs have been accidentally discovered by their effects upon cattle. This will illustrate the first case.

The effects of poisons are repeatedly ascertained by trials upon animated bodies—trials designedly made, but without the effect being foreseen. This will serve for the second case. And when these experiments are made to confirm or refute an hypothesis, they will be an instance of the third case. The first case is like falling in with a desert island in a new latitude. The second, like a voyage of discovery to explore an unknown sea. The third,

like the discovery of America by the masterly mind of Columbus.

The analogy will be useful to us in laying down some practical rules.

If the crew of a ship, that fell in with a new island, were all of them blind,—or if they forgot to note down the discovery, for the benefit of those who came after them,—or if they should carelessly mistake a cloud or a breaker for an island, and not ascertain the fact; it is perfectly evident, that the fortuitous coincidence would be useless, and the negligence sometimes pernicious. And so in the numberless conjunctions which perpetually are thrown before our eyes; if we are either insensible to the fact, or omit to record it for others, or neglect to repeat the experiment, with a view to confirm our observation, we are not only useless to society, but frequently most mischievous members. How then shall we prevent these faults? The last will fall under a process, to which we must recur again; and which may be left for the present.—Against the second we shall be able to guard, by giving a general habit of industry and carefulness; by accustoming the student when young to keep a register of singular facts; and by impressing him with the absolute duty of neglecting no single occa-

sion in which he can benefit society. The correction, however, of the first, is infinitely more difficult. It seems to depend upon our physical organization, more than any other process of the intellect; and to be more rare, and more subtle in its nature, in proportion to its superior importance. Some minds are so dull and lethargic, that they must be roused and shaken into observation. Others are so active and alive, that nothing escapes them: every sense is open, every fact strikes; every anomaly or singularity is fixed upon, and seized in an instant. Now, whence does this difference arise? It is very certain, that, what we term heaviness of body is frequently found united with this listless temperature of mind; and that a sanguine and irritable constitution is as frequently connected with quickness of perception. It does not appear, however, that the temperament of our bodily organs is likely to affect the mind in this case, farther than by affecting the senses,—by rendering some more acute, and some more dull: just as many things escape a short-sighted eye, and many sounds are lost to a partially deaf ear. The real intellectual phenomenon, must be traced to intellectual principles. And if we examine the method employed by nature to rouse even the most inert dispositions

occasionally into active observation, we may probably throw light on a point of much practical use. Of the facts then which occur to our minds, some are painful, some agreeable, and some indifferent. The two former kinds cannot meet us, without making themselves felt and observed; and the more acute the sensation, of course the more permanent the impressions. And as far as susceptibility of sensation may depend upon our bodily frames, so far acuteness of observation may be dependent upon it likewise. But, as the moment a fact is not felt, it is reducible under the third kind; those I mean which are indifferent; and as we probably shall find it is in our power to prepare any mind for the perception of these, it does not appear even here, that an unobserving disposition can find any refuge in the natural constitution of his body. How then may we produce an alertness in observing these indifferent facts. Some of them, it is evident, force their way upon the attention by constant repetition. No man is ignorant that the sky is blue, or that steel and flint strike fire. Others produce the same effect by their novelty. And both repetition and novelty, act by the same law of universal association. Whenever two ideas, or two states of mind, have frequently occurred in succes-

sion, the first will always have a tendency to recall the second. If the vibration A, for a certain number of times, has been followed by the vibration B, whenever A occurs, B will occur likewise. How repetition acts by this law is evident; but, novelty acts in the same manner, by causing repetition; for the difficulty of breaking an association already formed, is precisely equal to the facility of continuing it. Whenever, then, it is broken by an external object, the mind is brought to a pause; it is thrown back upon the first idea, it recurs again to the second, and then again to the first; (for all facts are conjunctions, and all conjunctions are formed by at least two ideas;) the more distinct the new association is from the old, the greater is the perplexity; the perplexity produces repetition, and repetition infixes it in the mind. That such is the operation, is evident by the physical effect of novelty, and its result upon the mind—surprise; a feeling which is always indicated by a suspension of the muscular action, an arrestation of the blood, a protraction of the voice, and all other symptoms of slowness and difficulty in the action of the mind. That the effect of this difficulty is to throw the mind back repeatedly upon the first idea, is illustrated by a very common experiment, which every

one must have witnessed, who has heard a boy thrown out in repeating by rote, and recurring again and again to the last word, until he has recovered the next. That it is the result of a novel conjunction, not of novelty in a single idea, is clear, from the absence of surprise in the early perceptions of children ; and also from the same phenomenon in the case of the old, whose associations have frequently been broken, and their mind thus prepared for the shock. And hence also, no surprise is felt at conjunctions entirely new. No one expresses astonishment that a murder has been committed by a person whom he never has seen ; but if that person were his friend, or a man whose disposition he admired, such a conjunction would be far otherwise. No child is surprised to see an elephant with a trunk ; but a man, with such an excrescence, would be a very wonderful phenomenon. So that if we were to live after death, under circumstances perfectly new, we should feel no astonishment whatever ; and nothing can be more unphilosophical, than the German description of Adam waking in the Garden of Eden, and wondering at every thing he saw. This is an important point in the present enquiry. If the principles laid down are true, it appears that those persons are most observant of

casual facts, and permit fewest conjunctions to escape their attention, who have the widest range of pleasure and pains, and the greatest number of associations to be disturbed. It is also evident, that although we have no control over those pleasures and pains, which result immediately from physical perception; as, for instance, we cannot make a person delight in sounds, if Nature has brought him into the world perfectly deaf; still, over associated feelings we do possess considerable power; and, by a judicious system of education, may, not indeed create new sensibilities, but connect those which pre-exist in the mind, with as many perceptions as we choose. Again, by the extension of knowledge, as we add to the stock of conjunctions possessed by the mind of the observer, we shall make him more extensively susceptible of novelty. This position, however, requires to be qualified. Take a child, and an adult, with equal acuteness in their organs, and let a certain number, say one hundred facts, be brought before them; to the child, in all probability, fifty of them will be perfectly new; and being perfectly new, not interruptions of former associations, they will excite no surprise whatever. If they make an impression, it will be from the positive sensation produced by

their action on the organs. To the adult, perhaps, ten out of the hundred will be the only conjunctions not perceived before. And when we consider how soon we acquire that little stock of ideas, out of which all our intellectual riches are composed, it is probable, nay, certain, that even this ten will not be perfectly new, but interruptions of old combinations. Let, however, these facts be confined to the every-day appearances of nature, let there be no research on either side ; and such is the sameness and regularity in the obvious phenomena of the world, that the chances of novelty will every day increase to the child, and decrease to the adult ; just as the horse which has been tethered the first, will eat out his pasture the soonest. Lengthen, however, the tether of one horse, and continue that of the other unaltered, and the proportion again is reversed : and give a man the privilege of search beyond the mere surface of nature, while you limit the other to facts which are obtruded on all by the senses ; and you open to the former innumerable chances of novelty, proportioned to the range of the enquiry. While the limits are the same, the child has the advantage of the adult ; afterwards, the adult of the child. Whoever has travelled with a child, an ignorant man,

and a philosopher, must have seen this distinction illustrated, and experienced that the observations of the child bear the same ratio to those of the man, as the observations of the philosopher to those of the child : and the remarks of the child will turn upon the every-day appearances of things, while those of the philosopher go deep into finer and less perceptible distinctions. It will, therefore, be highly desirable, if we may continue a common illustration, to lengthen a man's tether, to give him the desire and the means of pursuing his observations, into the more recondite secrets of Nature : and here also while we extend his range to limit its direction, that every thing may be remarked which is worthy of remark ; and all the pasturage fully consumed in one part, before he proceeds to another. With respect to the stimulus to enquiry, the subject will again present itself. The limitation is of obvious importance. Nothing has so tended, in the present day, to produce a general diffusion of superficial, and useless knowledge, and such a scarcity of superior attainments in any particular department, as the neglect of this principle. It is, perhaps, the natural result of universal education. Formerly, a man could afford to be ignorant of many parts of science,

among others who were ignorant of all: now, no one can enter into society without meeting very many minds informed to a certain extent, and according to their different turns, in various departments of knowledge. And the necessity of supporting conversation, with the fear of appearing to be ignorant, induce us all to prepare ourselves slightly for a general skirmish, instead of grappling decidedly and manfully with a single antagonist. It is lamentable to think what an injury science, and, through science, mankind, must sustain, if some steps are not taken to remedy this increasing evil. If we are content to plate society with knowledge, instead of procuring, at once, a solid and durable metal, we shall assuredly find, in a few years, that even the coating will entirely disappear. And all that can be done, is, for every individual to direct his attention to some one quarter pointed out by its general utility, his own natural bias, or his means of acquiring information, and to be content with ignorance in others. Human life is too short for more than this: and he who thinks soberly of his own intellect and the pursuit of knowledge; he who is really deserving of the title and praise of a philosopher, will never permit a paltry vanity, or a puerile shame to interfere with his duty to mankind.

It may not be useless to subjoin the following observations connected with that case of synthetical enquiry, in which we are anxious to ascertain by experiment or observation, the various effects or consequents of a given antecedent or cause. In this process, as in the voyage of discovery by which it was illustrated, we may have either to ascertain theories of others, or hypotheses of our own ; or, we may have no definite end, but the collection of whatever we may fall in with. In which circumstance shall we be most alive to the facts which occur ? Certainly, when roused to acuteness by the right of property in a new discovery, and anxious to obtain confirmation of opinions preconceived by ourselves. He who is content to go no farther than others have gone before him, and to drink up the knowledge of others, without any contribution to its springs, may pursue his enquiries solely upon the basis of acknowledged principles. And such an enquiry will tend to little more than to impress those principles upon his mind, to amuse him with a display of his own knowledge, and to confirm him in carelessness and error. But he who is bold enough to think for himself, and aims, not at the adoption of statements, but at the correction of errors, the confirmation of truth,

the modification of too general principles, and the ultimate extension of knowledge; such a man will enter upon enquiries for himself. An hypothesis or conjecture, however slight the analogy which supports it, will give a zest and an interest to his labours. Let him only be honest in his search, (and even a slight bias will be amply compensated by the vigour which results from it) and he will seldom be ultimately wrong. Like a stone bounding down a hill, the impetus will be checked here and diverted there, and this fact will impede, and that increase the momentum, but its course downward will still continue, and be carried on infinitely farther by the very opposition which it encounters. And thus, perhaps, it is not too general a principle, that no man should enter on an enquiry without some hypothesis of his own. These hypotheses are easily formed, from common and obvious analogies. It matters little how vague and false they are at first; experiment will gradually reduce and correct them: and all that is required, is, industry to elaborate the proof, and impartiality to secure it from distortion. The observation is equally applicable to consecutive and coterminous conjunctions; whether we are enquiring into the effect of arsenic on the health of

a horse, or into the constituent parts and qualities of the poison itself.

One method then of discovering the means to produce an effect, is by previously observing the effects resulting from the employment of the means. Whenever a number of experiments upon fire have shewn us that it dissolves metals, and hardens bread, and boils water, we shall never be at a loss to obtain any one of those effects. Great care however is requisite to distinguish in these experiments a mere coincidence from a consequence ; and it is not till they have repeatedly succeeded, that we can venture to pronounce with certainty on this point. Almost the whole of our common practical knowledge, and a great part of our scientific acquirements have been obtained in this manner. Casual conjunctions in chemistry gave us most of our valuable discoveries. The common observation of society, enables us all to act upon the minds which surround us, with tolerable certainty and precision. And when we have recourse to experiments this method is peculiarly useful, from the unlimited range which it takes, and from enabling us to draw as it were, upon nature for every variety of effect which our imagination can suggest, or the infinite possibilities of our combinations will allow us to attain. This

process however, though dignified by the name of synthetical reasoning, is strictly and purely mechanical, and reducible under that law of association, to which we have so frequently alluded. A fact either very painful, or very delightful, or very new, will naturally with itself recall to the mind, the circumstance which immediately followed it; and if that second circumstance be likewise very painful, or very delightful, or very new, the tendency to associate them will be still more strong. Most of our popular superstitions are founded on this principle. A comet appears, and a civil war breaks out; both novel and alarming circumstances. The next time that a comet appears, a war by the vulgar will be anticipated likewise; and should such a coincidence occur the association in all probability will become indissoluble. "Ah," exclaimed a fisherman one day, "if that balloon goes up again we shall have no herrings this winter." The two rare occurrences had once fallen together; and together they were a second time expected. But the balloon did go up, and the herrings did not disappear. The association was broken and the fisherman had ceased to consider the two phenomena in the relation of cause and effect. Now the reasoning of the philosopher, if reasoning such an instinctive process

can be called, is precisely the same. And nothing but a more extended observation which has frequently broken the conjunction, and thus destroyed the tendency to associate, enables him to laugh at the alarm of the fisherman. There is just as much real connexion between a balloon, and a failure of fish as between cold and the freezing of water, or arsenic and the death of its recipient. And the only difference lies in the repeated succession of one case, and the interrupted succession of the other. The philosopher himself instinctively will have the same tendency as the fisherman; till a case of interruption has occurred, he will hesitate to deny the connexion, difficult as it may be to reduce under any established phenomena; and hence it is that the most sensible minds are sometimes accused of superstition, though the folly lies rather with those, who think we can pronounce upon connexions, from anything but repeated experience. The only *rational* part of synthetical reasoning is the suspension of the judgment till that experience has been acquired; or the immediate denial of a hasty inference. The former act of the *reason* is perfectly mechanical, and results from the repeated interruption of hasty associations. The latter is equally mechanical, and results from a previous interruption in this particular instance.

Whether there is anything very spiritual or intellectual in these operations, or whether animals are not equally endowed with them, may be questions to shock our pride, but to which, only one answer can be given; and it is perfectly evident, that in all this synthetical reasoning, the mind is just as passive between opposite experiences, just as mechanically subjected to an unalterable law, as a shuttlecock between two battledores, or Mahomet's coffin between two opposite attractions.—Place but one loadstone, and it immediately drops—place another, and it hangs in the middle.—Increase the power of the first, and it falls again, but slowly and reluctantly; equalize them, and it becomes suspended once more:—and it is so with the human mind; one experience decides for the present; an opposite experience leaves it wavering.—A third drags it slowly to the side which it supports—and when both sides are equally balanced; if the subject be theory, it is safe to remain suspended; and if practice, our own inclination will give it an incidental push, and send it at once to the side which we prefer.

It is evident, of course, that we are not likely to meet with these opposite attractions except in proportion to our ignorance. As far as our observation

extends, the laws of Nature are not indeed invariable, but not frequently varied.—A medicine which cures a disease in one man, will cause death in another. It is not that the same medicine will produce these two contrary effects; but that the two cases are not the same.—The combinations are different, and we have not been able to analyse them. This however brings us to the second method by which we obtain conjunctions in the relation of cause and effect; and which is termed analytical reasoning.

What, then, is the process by which, when an effect is given, we are able to discover the cause? or to state the same question more simply, how do we ascertain the invariable antecedent of a certain given consequent? Evidently by finding out the antecedent, and afterwards applying it synthetically to see if its effect is the same. Now if all the attributes which surround us, and which, when followed universally by some other attributes, we consider respectively as the cause of them, were simple elementary and uncombined, or if our eyes were sufficiently acute to analyze by inspection the compound forms in which they appear, allowing the laws of Nature to be invariable, or finding at least that our experience is sufficiently uniform to enable us safely to act as if they would continue so; which

is all that is required in life, one single instance would be quite sufficient to enable us to form a perfect practical induction. And thus it is, that the more simple the substance or idea with which we have to deal, the more unhesitating is our generalization, even after a single experiment. A child never doubts that the fire which burnt him yesterday, will burn him to-day, or that two things which are equal to the same, are equal to one another, where he has once seen the axiom illustrated by a single example—and hence one great advantage in mathematical reasonings, resulting from the simple and uncompounded nature of their elementary notions.

Since, however, our eyes are extremely defective, and some attributes which act as causes we are unable to see, such as the states of the human mind; and others are so combined as to appear elementary, though in reality compound; and others again are combined so multifariously, that one influence clashing with another, it is difficult to calculate upon the ultimate effect by an accurate estimate of their several forces; in endeavouring to ascertain the cause of an effect it is necessary to conform to the following process.

I. To obtain a perfect analysis of all the circumstances.

II. To take each of these separately, and in groupes, and observe which of them is then connected with a similar effect.

A man is found dead. What was the cause of his death? His body is opened, and ten different kinds of nutriment are found in it. But nine of these could not have killed him, for tried either previously or subsequently upon similar constitutions, they are perfectly innocuous. The tenth is tried, and death ensues: this consequently was the cause.

A passage in a poem produces a feeling of sublimity: it is not merely the words, for elsewhere they fail to affect; nor the rhythm, for the same reason; nor the imagery; nor even the passion. But the sentiment detached from the rest is found to be noble and elevated, and the sentiment is the cause of the sublimity. Criticism in the fine arts is nothing but a series of these analytical processes. Metaphysical researches are the same, and the operation is necessary in all cases where phenomena are given, with a number of antecedents, and the essential antecedent is required.

Three things, then, are here necessary:—

I. An accurate analysis.

II. Repeated experiments.

III. A careful comparison of these experiments with the prior antecedent; since similar effects are only to be expected from similar causes.

There are few words which have been so confusedly employed as the term analysis. The primitive process to which it was applied, was simply the division of one whole compound substance into its primary elements: and when we have clearly distinguished what we mean by the words one and whole, its various significations will be easily traced. Strictly speaking, every single perception is one; because it is the mind itself in one state. But not only single perceptions, but groupings, not only a single link, but any number of consecutive links, become one, by a peculiar faculty of the mind—resolvable again into the law of association. Any number of perceptions of which the mind is conscious, running connectedly into each other, the second being anticipated from the first—the third from the second,—the fourth from the third,—and so on, till the mind has exhausted all the ideas which it had either previously associated together, or which are connected to the senses: this whole chain becomes one. We may either employ the name of the principal link to signify the whole collection, or, which is much more rare and

clumsy, we may frame a compound word out of as many simple terms, as there are simple perceptions in the compound idea. We may break, in short, the series of our perceptions into as many pieces as we like; now cutting the chain here; now there—now detaching four links—now six—now twenty. The principle on which it is done, is the law of association, which leads us to pass instinctively and connectedly into those consecutive states of mind in which we have often before existed; to consider something as wanting and imperfect, till all those anticipations have been fulfilled; and to pause mechanically when they have been completely run out. A whole is either a single perception, or any number of connected perceptions, in which no anticipation is wanting. Every whole is likewise a substance, and is expressed by a substantive in language; and every perception which forms only part in a groupe, is an adjective. There is no difference whatever essentially between the two: they are both representations of certain states of mind; but when that state is detached from all the rest, we speak of it as existing by itself; when considered in connection with others, we treat it as nothing but an attribute. Hence all the phenomena is language with re-

ference to these parts of speech : their mutual reciprocation ; the formation of abstract nouns ; the indication of the change from the adjective into the substantive, by an inflection or addition at the end of the word ; and others, which it would be now irrelevant to mention. Hence, also, one principal source of the mischiefs and ambiguities of language. For, employing as we do, the sign of the perception A to represent a connected series of A B C D E and F, and the length of this series being determined solely by the previous associations of the party to whom the sign is addressed, one man will conceive it to indicate but two links in the series A and B ; another will have three links suggested to him ; another, four ; another, six, according to their respective information, or accidental experience : and the associations of one man will totally differ from the associations of another. To the rustic, every abstract word will call up a multitude of ideas which are found, perhaps, only in one individual. To the philosopher, perhaps nine out of ten of those ideas will never occur, and his series will consist not of obvious and external circumstances, but of minute and recondite distinctions.—The word cat, to a child or a plough-boy, signifies the particular

cat, which sits in his own chimney corner ; if such a person had never seen but one, he would infallibly believe that all cats were precisely the same ; tortoiseshelled, long tailed, of a certain height, perhaps with one ear, or a spot on its back ; and when the philosopher, employing the same word, began to give his description, rejecting from it all these particulars, and confining it to those qualities in which all the varieties of the feline race coincide ; no two sets of ideas more different would be found to be meant by one word. This appears to be a simple account of the doctrine of abstraction. It reduces the faculty under one general law. It accounts for the rapid and instinctive formation of abstract nouns : it shews this operation of the intellect, like every other operation of the mind, to be purely mechanical. It does away with all the absurdities of essences, substances, qualities, accidents, and properties—it explains the progressive transmutation of the meaning of words : first indicating simple perceptions ; then all the groupes of perceptions with which these were usually combined ; then, gradually reducing their number, as the increasing observation of objects superficially similar, cut off now one idea, now another ; and finally arriving at such a pitch of abstraction as

scarcely to bear definition, and in many cases, to become by use entirely insignificant to the mind. As it explains the abuse and formation of language, it also illustrates its utility ; since these abstract words enable us to calculate and reason with the same advantage of facility and quickness as algebraical symbols give to mathematics, and a paper currency to the operations of commerce. And if we could but fix the precise number of ideas to be represented by each word ; and limit the creation of paper money to the actual value to be represented, we should attain as much accuracy, with as much benefit in these two cases as in the use of the instrument of analysis.

Such being the nature of unity and a whole : each merely a conception of our own minds : and indicating no counterpart in any external existence, the term analysis is employed to express that process by which instead of taking one single perception, or two or three perceptions, or any sign of this or of these to indicate a larger series implied, but not gone through, we run through all the links of the chain severally and distinctly. This process is applicable analogously, first, to things ; and secondly, to the signs of things, or words. In the first case, it is the same as division,

whether practised in a line and superficies, or in a solid. Let a person open his eyes on a wide and extended plain, and he will gain one perception, probably of colour, accompanied by that sensation, which we denominate vastness. If, instead of closing his eyes and turning away, he commences his survey from any particular point, and carefully traverses the whole landscape, pausing at every line of light or shade by which Nature divides in general the surfaces which we contemplate, we might, perhaps, without any impropriety, term this minute observation an analysis of the prospect. It would bear the same relation to the first perception as the exterior of a ball which contains fifty balls within it, would bear to those fifty balls spread out upon a table. The two appearances are totally dissimilar; but from either arriving in both cases at certain identified limits, or from conceiving the object of both successive perceptions to be the same, we speak of the second as an analysis or division of the first. The second kind of analysis which is applicable to solids is similar to the first, except that here we actually produce an interval between the parts: we separate and detach them from each other. And of this there are two kinds, accordingly as these parts are considered as me-

chanically or chemically combined : and our object in both is in general to arrive at the most minute elements, which we can possibly bring under our senses. At a certain point, however, with all the powers of mechanism, and fineness of optical instruments, we must always at length stop. And if we may venture to conjecture the nature of substances, of whose very existence we cannot be positively assured, it is probable that the primary atoms of what we choose, without the slightest foundation, to call brute or inanimate matter, are perfectly impregnable to our attacks. It is scarcely necessary to point out the difference between this positive indivisibility of elementary matter, and the infinite divisibility of the idea in our own minds. In our own conceptions it is impossible to imagine a particle of matter not divisible, for this reason :—Our idea of it must be the idea of an object of vision ; but every object of vision is essentially coloured and extended ; since colour results from extended matter only, and our notion of extension is obtained from colour. But our notion of extension is also obtained by a progression from point to point, coupled with a peculiar feeling of muscular action ; and this progression essentially implies a notion of division into points :

consequently, our ideas of matter, however minute, must necessarily comprise divisibility. It is, of course, necessary to distinguish between its divisibility as a superficies by lines, and its mechanical separation as a solid : and also between the absolute and relative possibility of such a separation : between that which is possible to us, with our limited faculties, and that, which, when supposed to exist, involves no contradiction or absurdity.

The chemical analysis requires a considerable acquaintance with the laws of Nature : it is founded on the fact which we obtain from experience, that certain substances combine with one class more readily than with another : and the process is simply that of detaching one part of a compound substance from its former connexion, by presenting to it some other substance, to which it bears a closer affinity. It is evident, that neither in this case any more than in the others, are we ever likely to reach the primary molecules of matter, since the separation can only be effected by a second combination. Unless, indeed, the application of the partitive analysis at least, succeeds in presenting them to us in a simple and insulated form.

The analysis of words or enumeration of the ideas to be contained in them, is more usually termed

definition. And in this, two things principally are to be kept in view :—First, the number of ideas assigned to the word, by the determination of its employer : and, secondly, the correctness with which they are classed together.

Now, though language in its origin was probably by no means an arbitrary invention ; but the selection of its signs was directed by the physical operations of our bodily system, and the principle of association ; still it is evident that we may, in our present state of cultivated science form any system of signs which we choose, and fix to them an arbitrary value. This value, as in the fabrication of a new scientific nomenclature, is sometimes given and limited by the persons who stamp it. But, more generally, it is vague and fluctuating ; and varies like an obliterated currency with the circumstances into which it is thrown. Still, whenever any standards exist by which its extent has been marked out, as in the case of vocabularies and lexicons, we may refer to them for our definition. Where they are either defective, or, as is more frequently the case, erroneous, we must endeavour to fix a meaning for ourselves, by looking to the thing represented ; and this process will presently be alluded to. In the case of popular

usages, to understand the number of ideas generally indicated by a word, we must have recourse to a very trite and easy method. We must take some one instance in which its employment is common and acknowledged; and extract from it the essential feature denoted by the sign, precisely in the same manner as we educe the cause of an effect from the circumstances which attend it. The mode in which this extraction takes place, will recur presently. The study of a dead language is, or ought to be, one continued operation of this kind: and, even in our own, where there is a still greater liability to err in the acceptation of words, we should rigidly investigate their meaning in all subjects which are worthy our attention, that we may afterwards compare them with the ideas represented. One observation may be made here, applicable to every case in which the induction of Aristotle is to be carried on from individuals separately to the same things collectively; namely, that the labour is much simplified and facilitated, if we can, by any *a priori* consideration, limit the number, and obtain some principle of classification which may throw the whole mass into a few manageable portions: and if this principle of division is in any way essentially connected with the sub-

ject of inquiry, the process becomes proportionably easier and shorter.

A far more important question than the actual value of words, is the value which they ought to bear. We are frequently lamentably ignorant of our own meaning and that of others, even on the commonest topics ; and we as frequently involve ourselves in arguments, which might be terminated in a moment, by a definition of our words in the sense which we wish to attach to them. But we are too apt to receive definitions when given as the standard of reality ; to admit debased currency into circulation, and calculate with it without suspicion of the forgery : and nearly all the errors in philosophy and common life arise from this careless reception of the arbitrary coinage of others. When ideas have long been classed together under the same word, it becomes very difficult to separate them. We easily add to the number as new properties are developed, but it is a very hard thing to detract. In performing, therefore, the analysis of our verbal signs, two errors should be constantly checked ; one, the classification of inconsistent words under the same denomination ; another, the annexation of any idea which is not warranted by the fact. The first error perpetually slides in by

the employment of abstract words in definition. Justice, we all allow, is a virtue ; and yet when the term is applied to particular actions, we frequently find it denoting things, which if referred to the proper standard, are any thing but right or good. And thus we naturally assign the praise and reward of virtue to the most illegitimate conduct ; and are startled and prejudiced against any reasoning which would alter the meaning of the word. Incalculable mischief is thus done, especially in the science of morals.

Liberty, we say, is a good, and the power of doing as we wish is Liberty ; and hence many have been induced to infer that the power of doing as we wish is a good ; and that the privilege of making ourselves miserable is not to be taken from man, lest we impair the dignity of his nature ; and there are innumerable similar cases which must occur to the most superficial observer. As to the strict limitation of the number of ideas which ought to be attached to words, we must have recourse to a minute observation of the process or substance to which they are applied, and admit none which are not actually included in them either as properties, susceptibilities, or powers. Most of our metaphysical errors have arisen from coining

words without exactly understanding the operations or faculties which they denoted ; and in the rapid transitions of perceptions through our mind, we are too apt to obliterate the nice lines of distinction, and mix our ideas together in very irregular combinations. If we wish, however, to reason with precision, we must remove all mystery and confusion, by appealing to the matter of fact ; and not only determine the number of ideas which usage has assigned to particular words, but cut them short without hesitation, wherever either carelessness or ignorance has accumulated them beyond the real truth.

The next kind of analysis is the one principally employed in ascertaining the cause of an effect. The others are merely subordinate to it. It is a complete collection and enumeration of all the circumstances which precede, accompany, or follow, a particular fact. The collection of course is to be made by observation, and enquiry ; and there is nothing in this process which any mind provided with proper external resources may not perfectly and easily accomplish. As a cause to us is merely another word to signify an invariable antecedent, which acts as a sign to announce the approach of its consequent, it is evident we are most likely to

find it among the circumstances which precede a fact. And there we naturally look for it. If a fire breaks out in a magazine, and a person has previously been seen there with a lighted candle, we fix at once on this antecedent as a satisfactory cause. If a man is found dead in a field, and another has been previously observed in his company, suspicion is immediately aroused. Great caution however, is requisite in this *a priori* inference. In both the cases instanced there is what we call a strong presumption, a probability in favour of the suspicion. But what is this probability? Nothing but the tendency of our mind, a tendency perfectly mechanical, to associate with certain facts, some known antecedent as their cause. Fully to explain this phenomenon, which has induced some sagacious persons to assert, that Nature has implanted in our minds the idea of a cause, would lead to an irrelevant discussion, in the present place. But the principles on which it is regulated are the following.

I. It is not true that the association of an effect with a cause is an universal instinct of the human mind. Nothing is more common than for an ignorant man to stare with surprise when asked to assign a cause for a fact. Nothing more common than a perfect indifference to such an enquiry, even

in cultivated minds, when the fact itself is agreeable, and there is no immediate desire of obtaining its second recurrence by our own exertions. The vulgar idea of chance, both among the ancients and the moderns, sufficiently refutes the assertion. For an accident in common minds is something which occurs without a cause; and it is only the philosopher that has found that every phenomenon of Nature, when elaborately traced out, is preceded by a peculiar sign, and who consequently assumes its existence, even when he is unable to discover it. The assumption is the result of the law of association, and so far it is natural. But that Nature designs the conclusion, and guarantees the truth of all such results, is quite as absurd, as to attribute to a general the design of destroying his troops, because their destruction is the consequence of their performing a manœuvre which he orders.

II. It is true, that whenever a phenomenon occurs which either positively or from association affects us with pain, we are all, wise as well as ignorant, anxious to discover the cause. I am suddenly seized with a peculiar sensation in my head. What is the cause? The physician explains it to me, and I am now enabled to apply a remedy; or, if the case be without one, to pass decidedly and con-

tentedly into the state of mind which it produces. I can prepare for, and anticipate it; and as the power of foresight is peculiarly calculated to give that quietude and repose to the mind which it always feels, whether in external facts, or works of art, or prospective reasonings, whenever its anticipations are fulfilled; so sudden and unexpected conjunctions, particularly if frequently repeated, startle, and harass, and terrify the mind; in many cases produce insanity; and would assuredly reduce the whole of mankind to that state, if the laws of Nature were arbitrarily broken. To present us with a novel effect of a painful, or even any description, without assigning a cause, is to place us at midnight in a wide plain without a guide, surrounded by pitfalls, and ignorant of the path. To assign the cause is to bring us back into a known and usual route. The one terrifies, the other composes us.

A superstitious temper is also anxious to discover the cause of a novel phenomenon, but for different reasons. In such minds there appears always to exist first, a belief in two distinct invisible agencies, and, flowing from that belief, the anticipation of a novel consequent from a novel antecedent. There

is always a notion, to use a vulgar expression, that something will come of it ; and from this the philosopher is free. A superstitious man is generally ignorant. Any derangement of his ordinary conceptions appears a derangement of nature ; such a derangement must be the result of an agency opposed to the system under which he has been accustomed to live ; it is unnatural, not supernatural, agency. But the present system, and, consequently, its Author, are from experience benevolent ; an opposite power must be the reverse. Hence the prayers, expiations, and alarm which followed the appearance, among the ancients, of a two-headed cow or a three-legged horse. Hence the superstitious terrors of an evil conscience in the present day, at any unusual occurrence. And hence their total absence among those who still professing to acknowledge two invisible agencies, throw themselves with entire confidence under the disposal of one.

In no case, then, apart from philosophical enquiry, is there any tendency in human nature to fix instinctively upon a cause, but in those which are painful, and alarm us. And an ignorant man has no such position in his mind, as that things

cannot happen without a cause. The philosopher, indeed, does possess this; but it results from a regular experience that Nature always foretells her phenomenon by certain invariable signs; and his anticipation is founded upon nothing but the tendency of his mind to repeat a frequent association. He has no reason whatever, unless by reason is meant conjecture, on which to ground his expectation, even in the present and visible system, without going to an admitted revelation. And still less reason has he to assume, from any analogy in the system, a fact which is clearly external to it; namely, the necessity of a cause for the production of himself and the creation. He is conscious of a series of perceptions passing constantly and rapidly through his mind, recurring one upon the other, sometimes in a regular order, sometimes in apparent confusion. The more minutely he examines them, the more regular he finds their combinations. And it is the work of a philosopher to draw out, as it were, this chain to its fullest length, and develope all the minuter links which are hid to the careless and ignorant. But in all this there is nothing to reason from. You have no ground of reason to infer that any cause is necessary for this appearance: that

before this series of perceptions, there was even any thing antecedent, without which they would not have existed. I have a chain put into my hands, and though on a casual survey I find no principle of order in the links, on a more minute scrutiny I discover that every silver link is preceded by a gold one, that those which are round, never occur without a square one to follow; that a green one is invariably accompanied with a red, and a black one in no single instance is found coupled with a white. Confine all my researches on the subject to the examination of this chain, and I know not any possible inference which I could draw to any thing beyond it. The parallel of the case is in the human mind. Go to reason and reason alone, and no human ingenuity, no observation of contrivance, no presumption from analogy, no argument which would bear the light of a sober intellectual enquiry could prove, satisfactorily prove the existence of a first Great Cause. All the boasted intellect of man, sinks powerless to the ground; and we sadly deceive ourselves when we think that a natural religion could be built on such a hollow foundation of sophistry. There is indeed much scope for conjecture, much for imagination, much for what we term probable assumption; but of reasoning, such reasoning as

those who deny revelation require, not a single iota. And the only conclusion to be drawn is this: That so far from revelation being useless, we must go to it for every thing we want. That even deism is not certain without it. And that even in the reception of Christianity, we must be guided rather by our hearts than our heads.

But why dwell so long upon these points? First, to enforce again the real nature of that probability, which we are too apt to consider a quality existing in the thing instead of a mechanical tendency in our own minds. Secondly, to illustrate the cases in which we are most apt to fix hastily upon an antecedent circumstance as the cause of an alarming event. Thirdly, to employ the illustration as a caution in all such instances; that we may distrust the existence of causation, where we know nothing but priority of appearance, and rigidly demand for confirmation, either the absence of all interval, between the antecedent or the consequent; or the test of a second experiment, or an additional proof derived from an analysis of the fact itself, and the circumstances that follow it. If I see a blow aimed, and a man fall, I think myself justified in assigning the blow as the cause of the fall. But even here, where the interval between the two perceptions

is perhaps only momentary, I may be deceived. Something else may have intervened, which I did not observe. And the longer the interval the more numerous the chances. Even a second or third experiment, however carefully conducted, may deceive ; since, when a change has once been effected in a substance, it is always difficult to ascertain precisely its previous condition, and combine a case exactly similar. An analysis of the circumstances attending the fact is therefore the most secure process, and instead of hastily fixing, as an internal tendency suggests, upon antecedents, we ought first to examine the concomitants, and seldom have recourse to *à priori* reasoning except when the fact itself is beyond our reach, is confusedly known, or imperfectly refuted.

A collection then of these concomitants, will resolve itself, where the fact may be submitted to the senses, into all the respective perceptions attainable through them ; and where the fact is removed from us, into all the several ideas, particular as well as general, which are suggested by the word that expresses it. In the case of a murdered man, into his position, the state of his body, the shape of the wound, the accidents of place, the size of footsteps, the trampling of grass, and all other circumstances

within a certain range, which it is impossible to define except by the nature of the instance. In the case of the French Revolution the Analysis will consist of an accurate definition of the general term, and an enumeration of the particular points in the individual fact. An enquiry into the cause of that pleasure which we feel from the representation of Tragedy, would commence with a complete description of Tragedy, with all its minutest features. So also in chemistry, in criticism, in every philosophical research, where a cause is to be ascertained, the effect being given. Having thus placed ourselves in the centre with all these ideas as the commencements of so many radii of thought, we are to try our way out by having recourse to former associations; taking each idea separately, and following the train of cause and effect, which previous experience had suggested, till we arrive at a satisfactory conclusion, taking care neither to follow our clue beyond certain limits, nor to remain satisfied with one or two radii, only; nor yet to try more roads than is absolutely necessary for the purpose. Let a fact be given me consisting of ten ideas. If I have no train of association connected with any one; the discovery of a cause is totally beyond my reach. It may be that I have such a train connected with

six out of the number, or even with all of them. But three are sufficient for my purpose; and I lose time and labour in pursuing any but those which are essential. To discriminate in this case, (and the faculty, particularly in action, is extremely important,) is not the gift of an instinctive intuition, but the result of experience. Many beautiful instances of this power are exhibited every day in the detection of crime, by officers familiar with such cases. A house is broken open. A common man, even though well-informed, will commence operations by observing, and noting down, and drawing inferences from fifty things, which cannot possibly lead to any important result. A Bow-street officer arrives, and without the least hesitation fixes upon one or two particulars, rejects all the rest, follows up his clue and discovers the offender. This quickness and decision in selection is solely the result of practical experience or previous thought. Place two men, of equal powers of mind in a labyrinth; exclude them both from all opportunities of recurring to former experience, and if one escape and the other is lost, it must be by accident; no rules can be given. But let one have been placed there before, and have found his way out by a particular path, he will strike into it at once, and arrive at the

end while his companion is wandering about, and trying others which lead to no conclusion. To a certain degree, indeed, promptitude and decision are the results of a vigorous, unintimidated mind. Where great consequences are at stake, every man is inclined to hesitate. And where the ignorance is equal, nothing but superior fortitude, or perhaps insensibility, or foresight of the dangers from delay, will induce one man to fix before another on his line of action. And here the result is at the mercy of accidental contingencies. But in all other cases, that quick sagacity, penetration, and celerity of inference which has characterized so many illustrious men, is the effect of a rapid decomposition of a fact, and of seizing from former experience upon those elements which will lead most immediately to the end purposed. As for instinct, intuition, inspiration, and all the words which cloak our own ignorance, and enhance our stupid admiration, they are perfectly unmeaning. An illogical Themistocles would be just as much puzzled to find his way out of a syllogism in baroco, as an unstatesmanlike logician out of the difficulties of the battle of Salamis. The third subject for analysis are the circumstances which follow a fact. And we recur to them whenever we hope to obtain in them some second effect, of which

the cause may be known already. It is like endeavouring to get in at the window when the door is closed, or when the rungs of one ladder are broken, mounting up by another at its side. The cause of A is required; and not known. But B is found consequent upon A, and its cause is known to be C. If we can establish a sufficient connection between A and B, the problem is solved, with some degree of probability. A wreck is seen on the coast; was it occasioned by negligence or a storm. But the shore is covered with sea weed, and other indications of bad weather; I can account for the loss of the ship. I can assign a probable cause, but no more. A mound is observed in a garden; and the grass on it dies in the summer; I infer that it is caused by a vault; and I may be correct, but there may also be nothing but a heap of stones. Again a murder has been committed. Who was the author? A man who before was poor, is now found in possession of money. Here is ground for suspicion; that is, the sudden acquisition of money without any visible resources, suggests to us at once some nefarious transaction. We naturally fix upon one which is before our eyes. Let this sudden acquisition be explained, and our inference is destroyed. Though such is the hasty

credulity resulting from the law of association in ignorant minds, that probably no length of time will entirely remove the suspicion, though confessed to be groundless and false.

It is evident that the principal utility of this analysis of consequences is to furnish us with a clue to direct our research; and that the conclusion would be valid only when we could succeed in shewing that both effects must have proceeded from the same cause. But as the whole theory of causation proceeds upon the principle, that for every effect there is a distinct cause; a perfectly satisfactory conclusion is evidently impossible, and we must have recourse to an analysis of the fact itself, employing its consequents solely as hints to guide us in our first enquiry.

Whenever then an effect is given to ascertain an unknown cause, whether in speculation or in practice, we must recur to this analytical process. If our analysis of the effect furnishes us with any element which leads us on naturally to a cause, by previously formed associations, the work is done. If former experience fails us entirely, we must have recourse to synthetical experiments; and try, as far as is possible, each element in turn, till we have procured a result similar to the one which we are examining.

A man has died after taking arsenic. Analyze the contents of his stomach. An ignorant man would be obliged to try the effect of almost all, perhaps of all, those contents, before he pronounced on the cause. A physician discovers at once the existence of a mineral poison in the state of the viscera. The experience of the physician has been already obtained. That of the common observer is to be subsequently acquired.

If we choose to call this process induction, we may. But it should be remembered that the only use of collecting a multiplicity of instances, is to provide ourselves with a certain number of ready made experiments; which we may apply, as so many touch-stones, to each of the circumstances assumed to be causes. The test of the cause is the repetition of the effect. If I have an instance by me, in which the circumstance I am putting to the proof, exists without the effect, I may throw it aside at once. And hence the necessity is diminished of loading the mind with facts, whenever they are close at hand, to appeal to when their testimony is required.

As a single illustration does more to explain and impress truth, than whole pages of abstract discussion, it may not be useless to take a single case and pursue a brief analytical enquiry on the principles

There laid down. As criticism, not scholastic but poetical criticism, is familiar to us all, we may choose it from that subject. There is a passage before me, which is sufficiently simple for the present purpose. It is the opening of the first book of Maccabees.

“And it happened after that Alexander, son of Philip, the Macedonian, who came out of the land of Chattiim, had smitten Darius, king of the Persians and Medes, that he reigned in his stead, the first over Greece. And made many wars, and won many strongholds, and slew the kings of the earth; and went through to the ends of the earth, and took spoils of many nations, insomuch that the earth was quiet before, whereupon he was exalted, and his heart was lifted up. And he gathered a mighty strong host, and ruled over countries and nations, and kings, who became tributaries unto him. And after these things he fell sick, and perceived that he should die.” This passage I have never been able to read without a strong and peculiar sensation of pleasure and pain. That this sensation is produced by the passage, I infer from synthetical reasoning, that is from perceiving the one always follow the other. Whenever I wished to produce the same feeling, either in myself or others, I should recur to the Maccabees. But in many cases this would

be impossible, and in all a very clumsy contrivance. If, however, I could, by any means ascertain the peculiar circumstances to which I owe the sensation, I might employ them as elementary principles with greater certainty, facility and precision, to assist me in new combinations. How am I to do this? Supposing I had never read the passage but once, and remembered the sensation without distinctly being able to recall the description which produced it, I must proceed to analyze the sensation itself, and finding it to be a mixture of sublimity, compassion, contempt, self-gratulation, humility, and that peculiar feeling which is produced by a sudden descent from a state of elevation and suspense; and knowing from previous experience the ideas whence these feelings proceeded, I might form a tolerable though imperfect conjecture as to the nature and contents of the passage. Still it would be but a conjecture, and the result of the search very vague and indefinite. Still more vague would be the enquiry, if seeing only a line of the description, I assigned it as the cause of the feeling. Nor would any subsequent influence on my conduct throw any great light on the subject. By analyzing, however, the passage itself, I shall be able to discover what I wish. Now this pecu-

liar pleasure which it conveys, must arise from some peculiarity in its construction. The mere antiquated language is not the cause, for it is found in five hundred other passages where no such pleasure is produced. Neither is it the mere enumeration of Alexander's conquests and the display of his greatness, for separate this part of the sentence from the rest, and the pleasure is not felt. Neither is it the last clause by itself, for the same reason. Neither is it the mere juxta-position of human glory and its termination death; for the same juxta-position is observable on almost every tombstone, and still no effect similar to the present. I might arrive at the same conclusion, by altering the language, the nature of the thought, and the other features alluded to, until I found, on omitting one, that the pleasure ceased to be produced. By both processes, which in fact proceed upon the same principle, that the cause is that which when added produces the effect, and when removed destroys it, I should probably find that the source of the gratification was the sudden transition from the first clause, in which the mind is kept suspended and elated, for some time, upon the grandeur of the Macedonian king, to the brevity and abruptness of the second, in which it is suffered to fall into the nothingness of human

pride. And such is the singular connection between our moral feelings of admiration, and the physical effect of altitude upon the mind, that I should discover a close similarity between the sensation on reading this passage, and that which is produced at sea, when a wave sinks suddenly from under a vessel. The nature of this analogy I should then endeavour to trace in other instances; with a view to ascertain some principle still more simple and universally applicable, by which the feeling might subsequently be caused. And probably this would be found to consist in the fact, that in both cases, physical as well as moral, there is a succession of impressions, each stronger than the other, when we think of superiority in general, and weaker and weaker in succession, when we descend to contemplate what is beneath us. This however is not a question for the present place, and the whole criticism has been merely adduced as an illustration of a process with which every student ought to be familiar, in studying grammatical subjects, and examining works of the fine arts, and especially when struck with delight at any passage in his orators or poets. To form a good taste, capable not only of judging, but combining, it must be made a perpetual question, "Why does this please?" "Why

does this disgust." And the discovery should be made by ourselves. The materials lie ready before us in our own minds. Why go to books for that which we can work out by our own efforts? Why adopt opinions upon authority; at which those who laid them down, arrived without any more advantages than are placed within the reach of us all? Let us go to Dr. Clarke for information respecting the contents of a Turkish harem, where we are never likely to be ourselves; but for that which is passing round the corner, let us trust nothing but our own observation.

And why is education so fatiguing? Because it is never made a process of discovery; because nothing but the memory is exercised; because we set the student down to the straight, dull, heavy, turnpike road of authority, instead of leading him on as in an unknown country, opening views by degrees, exciting curiosity, stimulating the innocent vanity of invention, and gratifying his sense of freedom, by confidence in his own powers, and participation in our researches. No man has thoroughly experienced intellectual pleasure, who has not discovered, or fancied that he has discovered, a new principle. The anxious curiosity with which it is applied to surrounding phenomena; the sus-

pense of interest while the investigation is proceeding; the satisfaction and repose of mind which we feel when the truth is ascertained; a repose which, most justly and philosophically, has been likened to the calm of a good conscience; then the encreasing certainty at each successive confirmation; the rapid developement of new truths and new relations, shooting out in every direction; the delight at perceiving a whole chaos of dark mysterious facts leap into light at our touch, and arrange themselves in regularity and order; all these perceptions of pleasure, we ought to make familiar to the student. But we do not, and shall not, and cannot, without some modification in our system, without an increase of zeal and of knowledge on the part of the instructors; and without we keep steadfastly in view the real value and nature of the Intellect, and do not conceive it a gift of a partial and inexorable law; but an instrument completely in our power, and improveable to its utmost extent, in every variety of character, by judicious and early cultivation. No fact is more true, than that all great men hitherto have been made so by accident. Some fortuitous combination of circumstances which have escaped even their own observation have led to habits of thought, and objects of research, which have afterwards

immortalized their names. It is fervently to be hoped, that we shall not trust to chance any longer; that we shall make men what they ought to be, ourselves; that we shall equalize intellectual power, and by equalizing, destroy its preeminence.

Having, however, obtained a succession of ideas, standing to each other in the relation of cause and effect, the next process is to repeat them, whenever we wish to attain a particular end. And this process is evidently as simple and as mechanical as any other result of the law of association. All our caution must, however, be employed, to ascertain that our previous and prospective cases are similar in all essential points. Similarity in all is quite impossible, except where, as in mathematics, we are dealing with simple ideas, which are not conceived as existing, except in the creation of our fancy. In practical cases, the mere distinction of time may frequently produce an essential difference, which we are unable to discover, till it is betrayed by the failure of the effect. Our senses again are so fallacious and so weak, when employed upon external subjects; our information of outlying circumstances, which create and destroy relations, without being perceived themselves, must necessarily be so defective; and we are so little able to

calculate upon the results of clashing and discordant influences, that we must be content, in all practical purposes, to fall far short of identity, and leave a vast number of features uncomparred, and even unascertained. We are, to a certain degree, working in the dark, and all that we can do, is to keep as near as possible in the path which we have trodden before. A man-trap may be set there, or a pit have been dug across it, since our last visit; but we must proceed as well as we can, and take our chance for the result. Now, this process of finding our way to a known end, by a road which we have travelled before, we have dignified by the name of reasoning; and we have made it the distinguishing feature between man and brute, as if it were not possessed by both, though, perhaps, in unequal proportions; and were not as instinctive and mechanical as the circulation of the blood, or the digestion of nutriment; equally the result of mechanism in our minds, and differing from them only in a partial subjection to our will. And if this were the place for such a discussion, it might be useful, perhaps, to follow up the connexion between these two faculties, and enquire if we ought not to reverse their present acknowledged subordination, and place the intellect under the will, in-

stead of the will under the intellect. That such is practically the state of things, is evident from the impotence of reason to restrain the passions, and the command which the will possesses over argument and sophistry. That it ought to be so, might be proved by recurring to the blindness of our minds, and shewing that good moral inclinations will lead necessarily to the developement of the understanding, and be our best and only guide, when reason, from our condition, deserts us.

At present, however, we have to follow the operation of reasoning, through its two grand divisions,—mathematical and moral : and it is nothing in either case, but the arrangement of our ideas in a certain succession and order, which we have before ascertained. Let us represent this succession by a chain of several links :—A, B, C, D, E, F. The connection, then, of A with C, I find by tracing it through B : of C with F, by shewing that C is always followed by D, and E by F, and so on.—And it is this process of connecting two links which we have never seen in conjunction, by filling up the interval with those which we know to be always connected, that we denominate properly reasoning. The connection between the two consecutive links, we ascertain in

two ways : and here lies the main distinction between the two kinds of reasoning :—It is either by hypothesis or by experience. We either couple them together arbitrarily by a fiction of our minds, without any attempt or wish to assert the reality of the connection : or we depend solely on former association, and act prospectively upon the faith of experience.

Let us take the first case :—

I commence by drawing on your concession. Grant me that any two ideas which I name may be connected together. I do not mean to say that they are, but merely imagine the possibility, for the sake of argument. For instance,—let us suppose that an army of men were to land here from the moon. Probable or improbable, the case will be the same. It is evident that this second link in the chain comprehends necessarily and essentially many others which I cannot detach from it, because they are absolutely parts of it, previously included in it by the arbitrary hypotheses of language. For instance,—departure from the moon, arrival on the earth, the passage through the air, &c. &c. all of which I must grant in my former concession, because the ideas are actually the same : the one being a compact abbreviation, the

other a developed series; and my mind cannot separate the two, because it cannot be in two different states at one and the same time. From this couple of ideas, then, I might evolve as many others from either extremity as there were subordinate ideas originally included by language under the main links. I should soon, however, come to an end; and the more simple my primitive ideas, the sooner. What am I to do to continue my reasonings? I draw again upon your indulgence. Let us suppose, I say, that they have wings,—deny the assumption, and my inferences are exhausted: but grant it for the sake of imagination; and I may again draw as many conclusions as there are elementary ideas in the new assumption. These men, therefore, will be able to fly, they will have something on their backs more than those who have no wings: they will be similar to things which have wings, &c. &c. When these conclusions are run out, I must again have recourse to hypothesis. Allow me to suppose that they have an appetite, each of them, equal to ten men; and here I gain at one stroke a whole universe of conclusions: for having once agreed to the use of the common arithmetical symbols in their ordinary acceptation, and allowed that 10 should stand for

ten units, and 5 for half as many, and 20 for twice as many, and 100 for ten times, and 1,000 for one hundred times as many,—I may play with these symbols as long as I like, running them into an infinity of combinations, and stating the same thing in as many different forms as there are different means of expression. If one lunarian has the appetite of ten men, two have that of twenty, and ten that of a hundred ; and though every one of my propositions is identical, that is, my second term is nothing but a different symbol for the whole, or a part of my first, the distinction of sound will operate as well as a distinction in ideas, to produce a great appearance of science and inexhaustible resources of undeveloped truths. Now, ridiculous as this appears, it is an exact, a rigidly exact, account of mathematical reasonings. Far be it from us to undervalue their importance as a most exquisite amusement for the mind ; as an exercise of rigid precise argument, which we ought to attain as closely as possible in our practical reasonings : and as involving the most important results, when applied to the laws of nature. But it is extremely necessary to draw a broad line of distinction between this play at hypotheses, and that moral process which we require in the business of life ; and

to point out, from the nature of its essence, where one is attainable, and the other not. To apply, however, the illustration to pure mathematics:—In the fiction respecting the men in the moon, we found that three kinds of hypotheses were necessary to carry on the reasoning. First, the arbitrary assumption of a proposition to start from. This is the definition of Euclid. Grant the arrival of some men from the moon; and grant the existence of a figure with lines radiating from the centre, and all of them equal. From this simple position, allowing me no other, I could only draw as many conclusions as there are simple ideas contained in the word equal. Some of these ideas which are most necessary, are developed and laid down in the axioms: as that things equal to the same are equal to one another; that a part is less than a whole; that take equals from equals, and the remainder is equal:—all of which are purely identical propositions, depending for their validity upon the hypotheses of language, and being different forms for expressing either the whole or a portion of those groupes of ideas denoted by the words equal, whole, part, &c. Our geometrical discoveries, would, however, be extremely confined if we had no means of creating fresh relations:

and for this purpose we have recourse to the postulates, a new class of hypotheses, which, when assumed as possible, enable us to construct any variety of cases which the fertility of our fancy can suggest. The concession that a straight line may be drawn, and the other postulates, precisely correspond with the permission to conceive that the men in the moon are provided with wings, and are gifted with inordinate appetites. It is by combining these hypotheses, that all our geometrical reasonings are carried on. The original definition with all the conclusions subsequently deduced, serving as the link A, the point to be proved as connected with them, the link C, and the postulates enabling us to construct a link B, which being connected with A, shall also include C. The validity of the whole reasoning depends upon the fact that C is included in B, as a part in a whole, without the possibility, even in thought, of conceiving the one to exist without the other; and that B is connected with A by an arbitrary assumption which we have no inclination to withhold, and having once permitted, we are bound to all the inferences. And if it be asked why mathematical reasoning, being thus applicable to all subjects, has been prosecuted almost exclusively in two

of the most abstract ideas, extension and number, it may be answered :—First, that the concessions here demanded involve no apparent improbability. An ignorant man believes that nothing is more easy than to draw a straight line, or to prove the equality of two figures. He takes up a pair of compasses and a ruler, and the work is done ; not perceiving that if he rests his argument on the accuracy of his design, his senses must always be imperfect, and his proof imperfect likewise. If the concession demanded, were, that people would arrive from the moon, he would reject all the reasoning at once. Secondly, it is evident that the argument is impressed much more clearly on the mind, when we can state it in connection with apparent facts, instead of betraying the fiction on which it rests at every step. A common mind believes that the lines which he sees are straight and equal : and, at any rate the eye is a material assistance in confirming and elucidating the reasoning. The memory is not so burthened, nor the perpetual recurrence to former assumption so necessary and fatiguing. Thirdly, as much of the improbability of facts, that is, our unwillingness to allow them, depends upon the complication of their elements, and the consequent difficulty of as-

certaining their precise similarity, the more simple the ideas with which we reason, the less we shall hesitate to admit the results of their various combinations. Now, no ideas are so simple and abstract, as those of excess, deficiency and equality, which are necessarily blended with our perception of magnitudes, whether extended or discrete: while, at the same time, being relative terms, they do not confine us to themselves, but enable us to connect them with other subordinate, but equally simple, notions. If it was not for this second characteristic, we should have no axioms: our reasonings in geometry would be strictly confined to the first definitions and the postulates; and our conclusion would necessarily be not a principle subordinate to the postulate, but a repetition of the postulate itself: as if we were to say,—“Suppose the lunarians come to the earth, and have wings, they will have wings,” and we could not go beyond. The working with algebraical symbols is still an improvement upon the employment of extended lines, from their enabling us to reason not merely analytically, in a sense of the word to which we shall presently refer, but in a more simple, abstract, and compendious form; though they lose, to a certain degree, an advantage of great consequence

with common minds, the representation to the eye. From this short review of mathematical reasoning, we may see that it is applicable to words, as we find it exhibited in logic; and to numbers, which are only another species of words, as we employ it in arithmetic. Nearly all our words, perhaps we may say all, are signs of a certain number of perceptions. We arbitrarily choose to shut up and inclose in each a certain number of ideas. Having done this, which is a hypothetical process we are bound to adhere to our assumptions. Just as a man who plays chess is obliged to conform to the rules of the game. And the whole science of logic, as applied to reasoning, is nothing but the amusing operation of putting the box A into B, and B into C, and C into D, and then shewing that A is contained in B, and consequently in C, and consequently in D, &c. &c. Now if it were possible to frame a language in which every word should contain only a definite number of ideas, a good dictionary containing these definitions would supersede in that tongue, all the works upon syllogistic reasoning. And the playing with syllogisms would be just as easy, just as palpable, and just as absurd, as the playing with those toys in which fifty little boxes are made to shut one into the other; and

transposing them, and separating, and putting them about, till we tire both ourselves and others. Happily for the Logicians, no such accuracy of language has ever yet been attained, or ever will be attainable. The mode in which different ideas are associated to different minds, and the difficulty of constructing a language which should contain a sign for every possible combination, without overpowering the memory, is an insuperable obstacle to such a scheme. Nor does it appear that we should gain much by such an invention but greater facility and precision when reasoning upon words; without any considerable advantage when occupied with things. So long as the present uncertainty remains, there will always be scope for Logomachy, and the difficulty of settling disputes, where no fixed principle of arbitration exists, will hide from us the absurdity of the dispute itself. It is by no means right to depreciate the study of logic as an ingenious system of mathematical reasonings, and as an excellent exercise for the mind when we require some substitute for the other branches of mathematics. It is also useful in leading us to ascertain roughly the notions, which by common consent, have been annexed to particular words. And it is a method certain though clumsily contrived, for applying a test to disputes,

which turn merely on names. But it would perhaps be desirable to lay down precisely the limits of its employment and utility, and to shew that its demonstrative force exists only when applied to language ; and that the instrument of syllogism, however acutely contrived, is but an awkward and unnatural mean for doing that which Nature performs for us by a much neater and more rapid machinery. The former position might be proved by shewing, that demonstration can never take place, except when each link in the chain of reasoning has been previously *included* in the preceding. But as one *idea* is never included in another, since every one is a distinct, simple and elementary perception, or state of mind ; demonstrative reasoning can be only applicable to the signs of those ideas or words, which do include in themselves a great number of ideas, and which, when evolved in order, furnish us with all our conclusions both in mathematics and in logic. If every word was the representative of a simple idea, we could have no demonstration whatever. That it is not so, is the result of our natural formation : and in the classification of our different ideas under their respective symbols, we have been led by an arbitrary chance. The first definition in the construction of language, corresponds with the assumption

of a figure in Geometry. The arbitrary annexation of certain ideas to some part of its predicate, or a second definition, answers to the postulate; and the statement of the subordinate relations comprehended in this second definition is the logical axiom.

The circumstances which led to the substitution of syllogism for the natural sorites, might form a subject for very interesting enquiry—as illustrative of the perplexities into which the science of Metaphysics has always been reduced, when it has plunged into the material or external world, instead of confining its researches to the operations of the human mind. This substitution seems to have arisen from the formation of classes, and the fiction of abstract existencies, universals, essences, and other jargon of a similar kind. . So that instead of representing the second idea or predicate, as an adjective already included in the subject by common consent, and only now developed in the expression, they erected it into a substantive and representative of a class, and made the subject stand to it in the same relation as a soldier to his troop, instead of its actual relation, as a soldier to his musquet or epaulet. They confounded the logical whole and the physical whole, and every other confusion fol-

lowed of course. The natural order of our ideas is this: A includes B; B, C; and if I choose to put into a separate proposition a statement which I have arrived at the moment I arrive at my second premises, I may infer from this that A includes C. Instead of this, the ancient Logician started upon the principle that C included A, instead of being included in it. They made it the great box instead of the little one—and were then obliged to twist and distort the chain of ideas into this form. B is included in A, C in B, and therefore C in A. Why that which comes second in nature, should be put first in a syllogism, and that which is first should be put third; and each idea be made to come twice over, when once would be sufficient; must be left for Aristotle himself, and no meaner man, to decide. Perhaps this very complexity renders Logic a better exercise for the attention, than a more simple scientific process. To do away with it would perhaps strike at the root of classification in general, and in this it might perhaps be useful; if it taught us at least to think rightly of that operation, and to remember that we are only sorting out and appropriating ideas to words, instead of dealing with actual existencies.—These however are enquiries which would lead to digressions much beyond

the compass of the present sketch. It will be unnecessary to follow the analysis of mathematical reasoning into the Science of Arithmetic.—Putting arbitrary written symbols and sounds in place of words at length, the process is precisely the same. The whole is carried on by means of hypotheses, which have assigned to each figure a certain numerical value; and if instead of the symbol, we employed the number which it denoted, every arithmetical proposition would be as palpably and ridiculously identical, as that two and two are two and two; that if three things are equal, two of them are equal; and that a rational animal is a rational animal. It is the employment of distinct signs that deludes us into the belief of a distinction in the things signified. Not perhaps that this delusion is not, in some degree, compensated by the amusement which it affords to the mind, and by the facility of computation and reasoning which we derive from the system itself.—If in calculating sums we were compelled every moment to run over all the units contained in each figure, we should soon be involved in confusion. The shortest sum would be a work of hours, and require a head as clear and strong as that of the first accomptant in the world. Or rather, we ought to go farther, and assert that

without signs we could not count at all. We could not distinguish or reckon the number of perceptions without a separate idea arbitrarily attached to each ; since, in themselves the perceptions are the same ; and cannot be discriminated unless some adventitious mark is put upon them.

To advert however, to the nature of moral reasoning, as compared with demonstration.

As the first couple of ideas which are the principle of moral reasoning—the two first links in the chain—are connected together merely by the imagination, and no proof is demanded or offered of any such actual co-existence ; so the two ideas which stand in the same relation to our moral reasoning, and all the ideas which follow them, are always assumed to be connected actually and in reality. The propositions are laid down as a matter of fact ; and the second term is not included in the first, but is perfectly distinct in its nature, and merely connected by succession—Cicero is dead, this water boils, the day is cold, metals are fusible, &c. &c.—And of the last it may be remarked, that it falls under a large class of propositions, in which, from the uncertainty respecting the precise number of ideas to be attached to each word, we are always doubting whether the argument is one of words or

of fact. This takes place when the predicate is the logical proprium, and signifies in general either the affection of the subject by some other substance, or the affection of that substance by the subject: either what we may denominate a susceptibility or a power. Those who have discovered the greatest number of these attributes inherent in the substance or quality which was primarily indicated by the word, will, of course, from constant association, combine the greatest number with it. The sign will stand with them for the whole series, and the proposition will be verbal and identical.—To the ignorant man, and those whose experience has been more interrupted, the connexion between the two terms will always be considered as a matter of fact. The truth of the statement in the former case depends upon the usage of language; in the latter, upon the faith of experiments. It is important to make the distinction, as it would abbreviate many disputes, and prevent much confusion in our ideas.

Some observations have already been made on the nature of matter-of-fact propositions. And it only remains to shew more precisely, that, as in the case of mathematical assumption, we neither wish nor attempt to prove them, but build up the whole edifice on an arbitrary hypothesis of our

own; so in moral reasoning, we do wish, and do attempt to prove our fundamental principles, but can by no possibility succeed. One mode of shewing this is common and easy. For as proof is nothing but a process in which a third and middle link is introduced between two others, to prove a connection which at first sight was not perceived; as if I shewed that two objects floating in the water were connected, by pulling up the rope which fastened them together: it is evident where two ideas are closely consecutive one upon the other, there can be no proof whatever. No third thing can be introduced where there is no interval to receive it. And though the object of philosophical enquiry is to find out as many links as we possibly can in the chain of our ideas; and to develope all those that intervene between two points; still ultimately we must arrive at those elementary portions, between which there are no others. Let the alphabet represent the series of our perceptions, and let A, E, L, O, S, V, and Y, be large and obvious letters, designating those conjunctions, which are most familiar and palpable to us all. It is the work of philosophy to find out, that between A and E, and L and O, &c. there are a number of smaller and less perceptible links; that A is not immediately connected with

E, nor L with O ; but that B, C, and D intervene between the first apparent conjunction, and M and N between the second. A common man asserts that his friend was killed by falling from his horse. The surgeon traces out all the intermediate facts. The fall from the horse broke his leg ; the fracture produced inflammation ; the inflammation was followed by a certain action on the bodily organs ; and that produced death. Not that even now he has ascertained all the links ; but they multiply in proportion to our knowledge, as the parts of an apparently solid substance become distinct and separate in a microscope. And that man will have a worthy and fitting respect for the dignity of our intellect, and the vast extent of our knowledge, who places the all that we know not, in the same relation to all that we know, as the finest magnifying instrument that can possibly be invented, to a short sighted human eye.

It is then to expect that the same thing should be and not be when we demand a proof of any elementary and primary conjunction, A and B, or C and D. For this reason we cannot possibly prove what is told us by the evidence of our senses. I see my hand in contact with a hot poker, and the perception of the eye is immediately followed by a

sensation of heat. I try the same experiment again, and the two states of mind again occur in uninterrupted succession. I am conscious of the fact, but cannot possibly prove it. And the attempt would be quite as absurd as if a man possessed of £1000 a year should feel dissatisfied at not possessing £500. Since consciousness is the highest degree of certainty which the mind can attain ; and every proof is strong only as it is resolvable into this, it is to want a glass of water when we are lying in the middle of a river. A conjunction then of ideas, actually present to the mind, we cannot prove to exist,—but we know that they do exist. Neither can we prove a similar conjunction in some past time. That is, the evidence of memory goes no further than to shew that the conjunction now present to our minds is present for at least the second time ; that we have been conscious of it before ; and even this proof is imperfect. For what is the test by which we recognise a perception ? and infer its re-appearance ? I think any one who examines the working of his own mind, will perceive that it is by a spontaneous and mechanical association, with some other, which is not called up immediately by the senses. The recognition may occur in two cases : one, where the idea, or groupe of ideas, is

immediately produced by the senses : the other where it is found to exist in the mind without any present external impulse. In both cases it seems that the criterion is the same ; and is founded upon this principle, — that the mind can be brought into a particular state solely in two ways : directly, by an action on the organs of sense ; or, indirectly, by previous association. If the idea is not produced by the first, it must be by the second ; and if so, it must be a second appearance. It appears absurd to say that this argument passes through our mind whenever we exercise memory : but it seems to be the explanation of a process, which Nature, by some curious instinct, performs for us, almost without our consciousness. And it is not the only wonderful case in which, by a mechanical impulse, she conducts an unthinking mind to conclusions, at which an educated man arrives by a longer but more logical process. Let us illustrate the two cases.

I. What are the steps by which we arrive at the certainty of having formerly perceived an object, which at first sight strikes us with a dim, vague, and uneasy sensation of remembrance ? This sensation, we all know, like every other imperfect state of mind, is full of impatience and pain ; and is

precisely the same as that which we experience in the attempt to recall a word, or tune, or idea, which we feel, according to the common expression, at the tip of our finger. What does a man instinctively do when he feels this half-recollection, this tendency to pass into a second associated state of mind? The first question immediately is, when did I see this? Where did I hear it? And the instant that in pursuing any train of old associations, with closed eyes, and his senses stopped up, he lights all at once, with full certainty, upon the idea which he conceives to be old; that instant he is convinced that its present is a second appearance. I am sure that I have seen that man before. Where was I likely to see him? At such and such a house. Yes, I remember, in a particular room, during a particular conversation. This idea falls spontaneously into some other series, and with that it must before have been connected.

Upon the same principle, and pretisely in the same manner, we recognise as second-hand all those ideas which are linked on by the spontaneous progress of the mind to any object of sense. If they are connected now, they must have been connected formerly. Hence, the more easy and rapid the transition from one to the other, the more certain

we are of their previous association. Hence the tendency to believe, that a simple proposition, acknowledged as soon as enunciated, has been before known. Hence, perhaps, the platonic notion of the pre-existence of the soul in a state where it had become familiar with those truths which it embraces at once without doubt. Hence the difficulty of persuading ourselves that we have not before seen objects, all the parts and attributes of which we find to accord with our anticipations. Hence the accidental associations of a dream, of fancy, or of poetry, will convince us, most erroneously, that we have been before in places, and seen persons and things, which we never have witnessed till now. In short, we never can recognise any thing but a conjunction of ideas. A simple idea we recognise by its instinctive and immediate association with some other ; as the first link of the two, when it is an object which instantly calls up some other idea in the mind :—as the second, when we light on it in searching to assure ourselves of its prior existence. The road which I am travelling, I have travelled before ; for it brings up, in close connection with it, the image of a person who accompanied me, and who is now absent. I have felt such a sensation as the present, for on casting about, where

I could have encountered it, I all at once light upon it fully.

It is, however, not unimportant to observe, that after perhaps the second, at any rate, the frequent recurrence of an object, we cease to reason upon it in this manner. The result of the reasoning is associated with the idea, and answers the same purpose. And hence in the case of things which meet us every hour in the day, we should probably find it most difficult to discover any one individual idea with which they spontaneously connect themselves, and from which we infer their previous contemplation by the mind. The general impression is associated with them instead of a particular one. And hence the delusive opinion that the evidence of memory is an instinctive impulse of Nature, which it is absurdity to question. It is indeed the work of Nature, but not an immediate work. It is indeed dependent upon instinct, but on instinct, many steps removed from the infallibility of a primary law. It depends upon the law of association ; but this itself, though an universal tendency, is only a tendency ; and is subjected in ten thousand instances to the correction, modification, and controul, of our pleasures and pains. And if we once place it beyond such controul, we shake the whole moral

and religious fabric of the world at once to the ground. Nothing, indeed, is so necessary in all our speculations upon the mind, as to separate the original intentions, and the inviolable laws of Nature, from their casual results, and tendencies which we are able to check. And in the present case, unless we do this, we must make Nature the guarantee of a great number of falsehoods ; since, so far from memory being an unerring guide, it frequently leads us to conclusions as to former conjunctions, which are perfectly and demonstratively false. It induces us to believe, that we have been at places, and seen objects, which we certainly never saw in our lives ; and requires to be kept in subjection to a very strict and vigilant calculation. This is not the place to pursue the elucidation of the question farther, though it opens, on every side, into many curious and important speculations. These hints may, however, be thrown out.

I. That the many instances which occur every day, of recognition by means of certain indescribable feelings, resulting from the contemplation of an object, instead of being fanciful, or the effect of some more solemn influence, are in perfect accordance with what we should anticipate from the phenomena of memory.

II. That if all our ideas were detached and insulated from each other, and presented separately to the mind, without any possibility of connecting them ; or, in other words, if every state of mind, which is meant by the word idea, was totally different from each other, and our minds were not so constituted, that the transition from one to another should frequently be gradual ; each running into each, and one commencing before the other was past,—that if this were the case, we never could recognise an idea as having been previously present, though it recurred a million of times.

III. That if in any state of insensibility, such as that produced by a fainting fit, a stunning blow, or a profound sleep, a man was transported to some other region, where every thing which surrounded him, both in his bodily organs and the external world, was totally different from the constitution of things here ; he would, when he awoke, conceive himself at the beginning of a new existence, and, though he lived to all eternity, he never would have the faintest recollection of the incidents of his preceding life. And

IV. We may see the utility of language in one point of view ; since a word once attached to a perception, enables us to recognise it at once, when

a second distinct idea might otherwise happen to be wanting.

The point, however, to which these observations have principally tended, is, to show that memory is no proof; that we cannot ascertain a conjunction at present in our minds, to have existed there before, with that infallible conclusiveness which we attain in mathematical propositions. It is not an universal connexion, for we know of instances in which it has been broken: and even if memory, or, rather, the law of association, had never deceived us hitherto, no past experience, however perfect, can afford us any certain deduction to a case, not already included in it. The position has been often repeated, but it cannot be stated too forcibly; that even if we had witnessed every conjunction which has taken place since the beginning of the world; and found not one single instance of deviation from the order of succession, we should have no ground whatever to assert that this order would be the same in futurity. The probability indeed, that is, the tendency of the mind to expect it, would increase at every step, and at last, become almost beyond controul. But this tendency is no more a proof or an argument to the actual fact, that my hope of finding water in

a spring, is a proof that any water is there; or my expectation of receiving a letter, is a proof that one waits me at the post. Our anticipation is the result of a law in our minds. It is not a truth laid down by Nature, not a fact which we are convinced of by some irresistible power, that the order of things is immutable; that fire will continue to burn, and stones to gravitate, and water to freeze. In ten thousand expectations we are deceived; and though this is the result of our ignorance, still if Nature had intended to guarantee the instinct of association, which leads us, she would guarantee it on every occasion, and sanction an infinity of falsehoods. The only possible ground of reason which can be laid for the inference, is and must be founded on revelation. Just as we ought to reverse the order of deduction in many other most important cases; and not to infer the truth of revelation from the reality of an external world, but the reality of an external world from the truth of revelation; and much less to assume that revelation is false, because it contradicts the universal stability of Nature, but confidently to expect the stability of Nature, because revelation is proved by the testimony of our own hearts, and the bible assures us, that the Being who rules the world, is not incon-

stant, to vary his designs, nor malevolent, to trifle with our happiness.

To the expectation of future conjunctions, founded on the evidence of memory, the same principle is of course to be applied. And thus it may be seen, that in the only three cases which can occur, of matter-of-fact propositions relating to our own minds, proof is quite out of the question. Of present conjunctions, we possess consciousness, but not proof: of past, we cannot prove the prior existence, and the future we can only conjecture. And the instant that we extend our assertion to some actual external existence, that instant the ground sinks beneath us, and we find ourselves separated from our conclusions by a gulph which it is impossible to pass. The principle has been stated before; and, perhaps, to return to it again, may appear an unmeaning repetition: but it is so extremely important, and has been denied by writers of such reputation, that its further developement may be useful. What ground, then, have we for the belief of an external world, and external agency? That we possess this belief is certain. How did we attain it? Is it a truth, as some assert, implanted in us by Nature? or is such a statement nonsense? Has Nature ever im-

pressed us with any belief, or with any truth ; or do such persons know the meaning of those two ambiguous words ?

Let us first examine the principles upon which our belief is founded.

Whenever we feel anger, or hope, or joy, or fear, we say that we are conscious of these feelings, and this without any idea superinduced of a world external to our mind. We feel at once that it is our mind, and our mind only, which is affected. In the case, however, of a headache, or of cold, or heat, or any other sensation which we class under the term corporeal, besides the actual sensation, we have an idea of something external to our mind, which we denominate our body. And exactly in the same manner, when we see a tree, or hear a sound, or feel a stone, or employ any sense upon objects which we describe as detached from the body, we imagine a number of substances, not only not existing in the mind, but completely distinct from the body. This notion, however, of an external material world, is made up of nothing but a combination of states of mind. Whether I see my own limbs or a tree, the ideas which we derive from them are nothing but states of mind ; and when I say that they are external to my mind, I mean only, that with those

ideas are coupled two others, the notion which we denominate an interval, and the feeling, or anticipated feeling of muscular contraction, of which the former presents itself with every object of sight, and the latter is usually employed to correct any fallacy of the eye.—Let us examine our own perceptions, and we shall find it no greater absurdity to conceive a third man with the perception of colours : or the same thing to be or not to be, than to assert our knowledge, however complicated the ideas, of anything not actually in the mind. We may fancy, indeed, and wish, and conjecture ; but proof we have none.—And a man, who when seized in the dark with a sudden attack of cramp, should infer that some person was necessarily treading on his foot, would be as perfectly justified in the assumption, as we are, when from any perception of the senses, we assert an external creation. It is difficult indeed, extremely difficult to fall back upon ourselves, and imagine the reality of the case. No effort of the mind is more painful, or requires more intense abstraction, than to follow up our notion of an external word to its first origin, and evolve it into its primitive elements. And much of the difficulty arises from the vague use of the word reality, and the employment of a false analogy.—When

Macbeth sees the dagger in the air, how does he attempt to prove its reality ? By the perception of touch.—When I fancy I feel a motion in the earth, how do I confirm the impression ? By appealing to the eye.—When a liquid which I am told is a perfume, is offered to me, and my sense of smell is not affected, I believe that the assertion is false. But whenever all those groupes of impressions, sensations, or ideas which I anticipate from previous association, are repeated to my mind, I say that they are real. The absence of a single link destroys the reality ; unless I can account for its absence by the deficiency of a prior perception distinct from the groupe which I am reviewing. This is abstract, but easily illustrated.—Supposing by an optical instrument you are made to see the figure of a man in your path : but on approaching it nearly, you found the colours become faint, the outline confused, and the whole impalpable to the touch, you would at once be convinced that it was not a real human being. This second groupe of impressions, though similar in some points, would in others be very different from that, which had previously accompanied those words.

A superstitious mind would immediately assume that this vision was a ghost, because all the ideas

and feelings associated with that notion, were now brought up before him. Supposing, however, that every time you walked this road the same appearance recurred ; you would, undoubtedly, consider it not, perhaps, as a real apparition, but as a real optical phenomenon. To have seen it once would lead you to suppose some affection of your mind, without any inference to an external cause ; but to see it twice, three times, repeatedly, and to run over each time the same chain of perceptions, would immediately suggest to you something as permanently acting upon your senses, and perfectly distinct from them. Your position would be this : that a fact constantly recurring, must have some positive external cause.

Let us drop this sophism for the present, and turn to another case.

Suppose a man, extremely quick-sighted before, was suddenly to become nearly blind. Immediately he happens to be informed that before him, at a certain distance, is a house or a hill, or any other object which he is unable to see. Supposing him not to have been sensible of any novel change in his organs of vision, no multitude of assertions would convince him that the object was not a delusion ; that it was not an idea existing solely in

the mind of his informant, without any external counterpart. But let him have been sensible of some unusual sensation, or when turning to exercise his eyes upon known objects, let him find repeated blanks in his anticipated train of associations, and he will gradually awake to the belief, that though unseen to him, the house may still really exist. How would he assume it? By appealing to the persons around him. And though the testimony of one might still leave him in doubt; if a number concurred in the assertion, without any object in deceit, he would pronounce the house to be real, and his principle would be this: That whenever different minds are affected precisely in the same way, there must be something externally operating independent of the subject affected. These two are the only positions on which we do build, or can build a belief in an external world, solely by the help of reason. We act upon them every day, and to many they will appear self-evident. Let us state them more simply.

I. A fact constantly recurring must have some positive independent external cause.

II. The same thing must be predicated of a similar contemporaneous affection in different minds.

It is quite evident that they both may be re-

solved into the question, Whether reason can prove to us the necessity of a cause ; and whether that necessity is more evident in the case of concurrent or repeated effects, than in those which are single and detached. Now necessity is nothing more than a word to express an universal and invariable connexion between two things. And I have endeavoured before to shew that this connexion of effect with cause, does not invariably exist in common minds, and is consequently not a dictum of Nature, and that although it does exist in the mind of the philosopher, still such a belief is the result of a partial experience in one chain of facts, and cannot possibly be extended by reason to anything beyond it. I have also endeavoured to shew that the combination of two things as cause and effect, is produced mechanically by constant association. That if experience had shewn to us ten cases of solar eclipses, and each one had been followed by a violent famine : even the wisest of us would be inclined to conclude that the eclipse was the cause of the famine ; and if further experience confirmed the conjuncture, the assertion would become as familiar and self-evident as that fire burns wood, or cold freezes water. And the notion of some secret mysterious influence passing from

the one to the other, a notion which has given rise in all ages to such superstition and folly both in religion and philosophy, may be equally traced up to a mechanical affection of the mind—to a false natural tendency uncorrected, as Nature designed that it should be, by reason and truth. It is combined with a principle which has been received without scruple into more sober speculations, than those of the astrologer or chemist of the middle ages : namely, that one thing cannot affect another, without being, either mediately or immediately, in contact with it ; that two bodies placed separately in a perfect vacuum, could exercise no mutual influence. And though within the range of Nature, without appealing to Revelation there appears to be a case in which this position must be disproved : I mean the motions of the heavenly bodies : which certainly do appear to be influenced by each other, while, if the interval between them was not a vacuum, their impetus would gradually be destroyed, still we are so familiarized to the fancy, that to dispute it has sometimes been considered a tendency to deny Christianity, and to overthrow all natural Religion. The real source, however, of this universal opinion of some hidden mysterious connexion between cause and effect ; this unwillingness

to detach them entirely from each other, seems to lie in the physical organization of the human mind. No two things ever come to stand in this relation but those which have been frequently associated together : the more frequent the association, the more close the relation. Now, whenever the mind has thus been in the habit of passing repeatedly and rapidly from one state to a second, the two seem to fall mutually into each other, and to become so intimately blended, that they cannot be separated without the greatest effort. Instead of being insulated and detached ideas, they are gradually linked and dovetailed into each other, by some physical process, which we cannot at present explain. And this amalgamation in our minds, coupled with the multitude of instances in which we seem, and seem only, to bring a cause into actual contact with the effect may account for the prevalence of the delusion. But if the whole notion of causation is thus reducible into mechanical associations, through which we are capable of breaking ; it is not a primary instinctive principle of Nature ; consequently we can conceive a fact without a cause ; that we do so even in the present system, where such a conception is probably false, is evident from the vulgar notion of accident and chance ;

and even if this be denied, we have no right to extend any inference from our present state to anything beyond its circle. Consequently we have no reason for supposing that any affection of our mind requires an external cause. Affections of other substances or ideas, we do find very generally preceded by some thing external to them : the more we enquire, the more general this order appears ; but beyond this we cannot go ; Nature does not tell us that this order is universal or necessary, and even if she did, her information would be confined to the several successive states of our mind, not to the mind itself and anything conceived to be beyond it. I fear this is a repetition of an argument already urged, but its importance may justify some prolixity. But not only have we no reason to make this deduction in the case of insulated affections, but we never do make it : and a hasty, dim, once seen object, if we look for it again and it is gone, never strikes us as real. We say our mind was affected and that is all ; there is no reality assumed without repetition. Now then, is the second case proposed at all more conclusive than the first ? Does the regular repetition of an impression, or its simultaneous existence in other minds prove at all more satisfactorily the necessity of external agency ?

Upon the same principles as before, we may deny that the mere repetition does naturally, instinctively, or necessarily associate with itself the idea of a cause. The most common and universally recurring facts, are those which in vulgar minds least require such an explanation. No countryman enquires why the sun rises in the morning ; and it was left for a Newton to demand why an apple falls to the ground.

It is the nature of the fact which leads to such an investigation, upon principles stated before.— If it gives rise to alarm, or desire, or curiosity, then we conceive a cause, not else—And as Nature does not supply us with this truth, so neither does reason ; for here again we reason upon a false analogy, or induction. Order, indeed, in the succession of our ideas, is always associated with the idea of a cause. Disorder we attribute to accident, or if we search for the causes, they are generally so numerous and complicated, that we desist in despair. But whenever we find any states of mind recurring again and again, at stated intervals, and in accordance with our expectations, then we are always sure to find, on retracing our steps, some fixed and external antecedent. How this happens is no subject for enquiry at present, though it is quite evident that where there is no recurrence, and regular

recurrence, we have no opportunity of trying the only test by which we can discover an antecedent to be a cause—and this in the case of physical phenomena. And in moral agency it is equally clear that a regular coincidence of circumstances, must from our mental constitution proceed from one regular agent. And it is not that an orderly series of perceptions is more conclusive to a cause than one which is disordered ; but that in the former, the cause is always discoverable, in the latter it is not—and hence we are apt to assume that one implies the necessity of a cause, and the other may exist independently. The argument is in both cases the same, and its futility, when transferred from our successive states of mind, to the mind, and something beyond it, has already been stated and explained.

To infer the existence of a material world, external to the human mind, from the testimony of other minds, seems at first a most irrational process, since it pre-supposes in the premises a very great part of the conclusion : still for this premise there is some ground of reasoning ; not indeed certain, but probable. And that we may keep steadily in view, the total impossibility of demonstrative proof when applied to external things, it may not be

useless to trace it. First, then, we must assume the existence of a creator; and secondly, what it would be impossible to prove without the existence of revelation, since revelation is necessary to our happiness: that this creator is a benevolent being. If so, he would not have given us desires and wants, which he evidently intended we should gratify, without also providing the means of their gratification. But we do find within us tendencies to sympathy, and social enjoyments which, require some kindred objects to rest in: consequently it is probable, that there are in the world other minds besides our own. This argument is evidently inapplicable to the physical world, since our happiness in no way depends on our belief or disbelief of its existence, provided we are not excluded from relations with a moral universe. But it rests upon two assumptions, neither of which we can prove: which if we attempt to place upon any ground of probability, we must refer to revelation, and this revelation once allowed, we reach our conclusion at once, without this circuitous route. Granting, however, the existence of other minds, and their testimony to similar perceptions, is this similarity at all conclusive to the existence of an external influence? If we saw a troop of cavalry in a plain,

performing certain 'manœuvres in regular succession, we might naturally conclude that the principle of motion was within it, and not require any external impulse to account for the changes. Nor would this be at all more necessary, if the manœuvres appeared disordered, than if they were regular; or if they were partly the one and partly the other, provided that ultimately we could reduce them all under one general system. Let there be, however, ten troops, each performing pretty nearly the same series of evolutions; represented as 1, 2, 3, 4, 5, 6. Let the succession of each not be cotemporaneous, but so contrived that the troop A is going through 4, 5, 6, while the troop B is performing 2, 3, 4. The troop C 1, 2, 3: and the troop D 5, 6, 1, and so on. If, notwithstanding, we saw them all at one moment fall suddenly into the same evolution, from whatever series they respectively were performing; A from 4, 5, 6, into 1; B from 2, 3, 4, into 1; C from 1, 2, 3, into 1; we should immediately look for some external cause, and imagine that the General had appeared upon the field.—Why? Let us apply the instance to the human mind, and we shall see. The more we examine the succession of our own perceptions, the more regular and invariable we find them. This re-

gularity we have no occasion to attribute to any external agency, since we have the option of referring it either to this, or to a necessary constitution of things; and we may choose the latter. And even though the regularity seems at times disordered, still our experience has been too short to pronounce upon the certainty, that what appears an exception may not in reality form part of the system; and in many cases we are able to ascertain that such is the fact.—But let us see a number of other minds, which from the principle that gives us their existence, we infer to be similarly constituted with our own, going through a similar series of perceptions, but not synchronizing with ours, nor with each other; let us observe them from whatever previous state, in whatever part of the chain they happen severally to be, pass suddenly into one and the same change, and having still the alternative of an external influence upon all, or of an internal constitution in each, with the task of bringing into order all these multiplied and complicated derangements; there is no doubt whatever which explanation we ought to assign.—Both, we should observe being equally probable, and equally incapable of proof.

By this mode then we might perhaps approach to

the inference of an external and material world. But it would be merely an approach; many leaps must be taken from one premise to another: many assumptions must be made, which once granted, would dispense with the necessity of the whole argument. Once allow, for instance, a Creator, and a benevolent Creator, and you allow the necessity of a revelation. Since, if the human mind is in a state of such perfect darkness as to every thing around it, and is so incapable of enduring the consciousness of its real situation, to have given it the means of knowledge, and placed it in such a condition, and yet withheld the only means which could make it other than an exquisite torture, this would not be benevolence, but a refinement and wantonness of cruelty.—Revelation, therefore, is probable, in proportion, not merely to our general ignorance, to which many may feel indifferent, or to our depraved inclinations, which many may dispute, but to the truth of this metaphysical axiom, that we know nothing, and can know nothing, but the states of our own minds.—And revelation once being assumed, by no very disputable process, an external world, both moral and material, is proved at once. But we are anxious to avoid revelation; to strike away from the broad

and open road, which leads through it to our conclusion, and force our unassisted way through the by-path of reason alone. Be it so. Yet even here one fact must obtrude on our attention.—That testimony is a much more likely way to attain our point, than the evidence of our senses. That from the observation of our own minds only, we can gain no proof of reality, further than as reality is but another word to signify a regular and unbroken repetition of perceptions. And that when we are able to struggle through our difficulties, and by the help of assumptions and conjectures to guess at our inference, we must do it by looking to the opinions and statements of others. This cannot be too often enforced—that testimony, multiplied testimony, is better evidence than our own observation. Still, whatever mode of argument we employ, there can be no demonstrative proof.—One chasm which we cannot bridge over, separates us from an external fact even before our senses. Another lies in our way when we endeavour to reach the past, through the mechanism of memory, and the fallibility of witnesses—And a third opens before us when we would advance to the future, by an induction not sanctioned by Nature, nor warranted by reason, that the future will resemble the past; or that even

if such were the case, our experience has been perfect and decisive. (*Vide Appendix A.*)

Such, then, is the difference between moral and mathematical reasoning.—The latter is a string of hypotheses, partly in facts, partly verbal. The former is a series of assertions respecting existing realities. The latter is constructed of propositions which we do not care to prove, and still less our hearers to disallow: the former is built upon premises which thousands are anxious to dispute, and which all our anxiety and efforts can by no possibility establish. The latter, by positively including each second link in the one which precedes it, prevents the possibility of separating them when once the hypothesis is granted: the former can never do more than connect the links together by a constant though partial experience; which does not extend to the future, and which still leaves it free to our will to refuse or withhold its assent, against all the proof we can produce. Very frequently it happens, that the two are mixed up together, by the employment of words involving subordinate terms: and still more frequently that our moral reasoning is conducted without any established connexion between the parts of the series; when we are called on to act on probabilities, amidst

an apparent opposition of experiences, and without means to analyze the fact.

Nearly the whole business of human life is carried on upon this kind of reasoning, upon a calculation of chances. The elements with which we have to deal are so complicated : the contingencies of the human mind so numerous : such a multitude of circumstances and relations are necessarily hidden from our view, that if we refused to move till moral demonstration were attained, the whole machine of society would for ever stand still. Here, as in ten thousand other cases, Nature is our best guide : she makes us consult and calculate when delay is practicable, and plunge boldly into action almost without thought, when the emergency is pressing on our heels ; she has made us incapable of balancing and adjusting any complicated statement of contingencies, lest we should lose ourselves in a labyrinth, instead of seizing a few principal points ; and leaves the remainder to chance.—For the same reason she has framed most minds to an unwillingness to engage in distant speculations ; that we may confine ourselves to facts within our reach. The facility of generalization which results from the mechanism of association, is another beautiful contrivance, by which even our ignorance

is made subservient to our good.—General principles, which are very abstract in their nature, and from never considering peculiarities of combination, are applicable to a vast variety of cases, enable us to act in a moment without the least hesitation—and they are never found so strong or so numerous, as in animals, children, and uneducated people, who always generalize most quickly, and are most prompt in their conduct, except where decision is impeded by the physical effect of fear. Old men, on the contrary, whose experience, and, in other words, whose chains of ideas have been frequently broken by circumstances, become timid, slow, and deliberative;—so also those who have met with frequent disappointment. Hence also it is that there are only two kinds of general principles which men retain to the last without hesitating—all others they modify and qualify till their minds form themselves into a habit of cautious and suspicious calculation. These two are the universal truths of moral conduct, which are confirmed by the longest experience, and which no combination of accidents eventually alter; and these simple axioms, which we derive from the commonest perceptions of our senses, and the resolution of identical propositions: so that no man is so prompt in

decision as a moral man in moral action, or a mathematical man in mathematical speculations. And it might be a curious subject for enquiry, how far the prolongation of human life beyond its present term would alter the character of the world, in rendering mankind more virtuous and less active :—whether, as a lengthened experience proved to us by repeated disappointments the frequent fallacy of our general principles, we should not by degrees almost cease to act except upon the spur of actual necessity, and retain of practical axioms those only which have reference to our moral conduct.—Such appear the principal provisions of Nature for driving on the current of human affairs in cases where we attempt to reason upon probabilities and consequences. What principle of motion has she applied in cases where this effort is not made ? in those thousands and thousands of daily acts which proceed from us without a thought, sometimes with a struggle against it—and sometimes in a desperate abandonment of calculations which we cannot adjust. How is it that we are made to act when we cannot or do not reason ? I am well aware of the momentous deductions which are involved in the present conjecture.—Let it, however, be fairly tried ; and if true, it must be beneficial. Have we

then any ground whatever for concluding that the mind acts upon the body, that it is any thing but a sentient substance, or that all our actions do not mechanically flow from peculiar affections of the body? Let us look coolly at this startling position. It is not assumed like the pre-established harmony of Leibnitz, to explain an inexplicable difficulty in the reciprocal influence of matter and spirit; for we none of us know, what the one is or the other, and to assert a distinction between two substances, neither of which we are able to conceive, has always appeared a philosophical absurdity. Whether the mind is matter or spirit, or whether there is any difference between the two, we had much better leave to the dreams of the Platonists, and the jargonists of the schools. We gain by the discrimination no inference to the immortality of the soul, which we do not possess before; since we have no experience whatever of any total annihilation of either matter or spirit. And whether all the primary, indestructible molecules of matter are not the same substance with the mind, and equally capable of sensation, if adapted to an organized system, is a question at least as plausible as the conjecture that this universe is divided between two irreconcilable opposites. It is folly however to

theorize when we are totally in the dark as to facts; and equally unwise to frame a fanciful hypothesis as explanatory of a difficulty, which meets us at every step, and which we cannot get over. The influence of the mind on the body is not at all more perplexing than the action of one body on another; and it is not therefore to avoid this exigence that the present question is proposed. Neither is it connected with any system of opinions, but appears forced on us by a consideration of facts. It is evident that one principle of motion lies in our bodily organs: and these organs, we usually say, are put in action by the influence of the will. The nerve of sensation produces an affection of the mind; this affection is followed by an act of volition; and this volition produces a contraction in the nerves of voluntary motion. Now, is there any occasion for this intermediate step, or does it involve an absurdity? May not the action on the nerves of motion follow at once from the state of the nerve of sensation, (and the physiological fact that they run in pairs seems to favour the supposition) and the sensation in the mind be antecedent to, or contemporaneous with, that action, without any link of causation between them? Is it not an absurdity to say that the mind wills a thing of which it is not

conscious? And yet no mind whatever, is aware of the means by which motion is produced; of the muscles which ought to be contracted, or the particular nerve which requires to be pulled. We imagine the mind to sit behind a number of strings, deliberating which it shall touch, according to the end in view. The mere statement of such a notion is ridiculous; and yet we say no less, when we assert that our will puts our limbs in motion. The primary affection of the nerve cannot be produced by the mind, for the mind is not conscious of it; but it may follow naturally and easily from a prior affection of the nerve, with which it runs over the body. What are the only cases in which motion is produced? There are four: two when the mind is sentient—two when it is not. The two first are both states of pain—one positive, such as that produced by a scald or a blow; the other negative, and less sensible, into which the mind sinks when it has nothing to engage its attention: restlessness is equally the characteristic of both. The two latter are cases: the first, of association,—the second, of some muscular action, which we cannot trace up to the mind, as in the convulsions of fits: but, in both, the mind is unconscious, or at least, exerts no volition. Let us take the first case: even

our own observation will shew us, that voluntary motion is never consequent upon a perfectly pleasurable sensation, because such motion would interrupt the feeling. And the purity of our pleasures may exactly be estimated by the calmness and repose which accompanies them. With pain, the case is the reverse. All the muscles are put in motion. The voice is thrown out; tears flow; and, at any rate, those parts of the body are instantly agitated, which have been most affected by the injury. Let us now go to the anatomist, and enquire whether that state of nerves on which a painful sensation follows, is not universally such as would communicate motion to the muscles connected with them. Experiments in Galvanism might probably throw great light on the subject. Let us then ask ourselves these questions: If a lighted candle is applied to the finger of an infant, why is the finger instantly caught back? If I receive an injury on my limb without seeing it, how do I instinctively apply my hand to the injured part? How does the child know, that by moving its hand, the pain will cease; or how does it find out the method of effecting the removal? How is it that particular sensations are always accompanied with certain definite invariable muscular affections? How can

we account for the stupendous efforts of strength, which pain sometimes produces, but which no force of volition can ever recall. How is it that we are motionless in sleep, though the will is in full vigour, and rouse ourselves the moment that the nerves are affected, without knowing that we are about to awake, or by what steps the change can be wrought. How is it that we never make a mistake, and pull a leg when we would move an arm, or wink an eye instead of closing a mouth; if all this was not performed for us, by some secret and unerring machinery. Many instances constantly occur, as in the nightmare during sleep, and in that sort of fascination which occasionally we all of us feel, in dreaming, nervousness, irritability, and even when wide awake; cases, in which the wish to move is more intense than ever; and yet no movement can be obtained, not because the organs of motion, but the organs of sensation, are deranged. At least, a touch, which alters the latter, restores to us the power we had lost; while any disorder in the former seems much more irreparable and permanent. These, and many other physiological phenomena, present us insuperable difficulties on the admitted fact, that our bodies are moved by volition. But they are easily explained, if the present

conjecture is admitted. To prove it, indeed, would require much anatomical research; but we are not yet prepared to receive it—and it is always for the advantage of a new truth, that it should slowly and gradually break upon us, first as an hypothesis, then as a possibility; next as probable, and lastly, as certain. If the demonstration were now ready, it would be better to propose the result as a disputable question.

There is another state of mind besides acute actual pain, which we denominate uneasiness,—and to this it appears that we are indebted for a great number of voluntary movements. These movements seem to bear the same relation to the gestures of positive suffering, as the irritability of fibres bears to their tension and contraction. And if we conceive that the will is their immediate cause, we are beset with the same perplexities as must be encountered in the preceding case. If pain, or a painful state of nerves be the only spring of action, so small a part of our life is happily passed in acute sensation, that we should be perfectly inactive during half our days, if Nature had not made the ordinary habitude of our bodies slightly uncomfortable. Fix a person in any one position, however natural and usual, and he will soon become

restless and impatient: confine his observation to objects which excite neither pleasure nor pain, and you will render him miserable. Let his thoughts stagnate in solitary confinement, and you drive him to insanity. Why is this? That it is so, our every day experience declares. How often would we willingly purchase a respite from apathy and indolence, even by acute torture. How often, as in gambling and enterprise, do we plunge into danger and pain, rather than do nothing. Whence the perpetual movements of an idle man: the craving after novelty; the anxiety for amusement; the misery of that vacuum in our minds, which follows after any excitement. Why are we constantly pushing on from one end to the other—living on the hopes of the future, rather than the enjoyment of the present; dreading to be abandoned to ourselves, and framing with such impotent care, contrivances for the destruction of Time. Not merely to escape from anticipated suffering—not merely to deaden the pangs of conscience, or to lay the forms of evil which haunt us in the solitude of our thought; but to avoid repose, because repose is painful. Because Nature is lashing us on with a secret but inevitable scourge, lest we frustrate her system by inaction. And when this is allowed, but

it is added, Yes ; we put ourselves in motion from reason, to relieve ourselves from present uneasiness. I answer that the notion is absurd : that if we reason, we reason to a conclusion,—which conclusion is the first step in action. But that no such conclusion is here, since no man since the day of the creation has known how to put his muscles in action, and not ten have been aware that they exist. Are we not indulging the fallacy of believing, that we are the cause of results which we would have produced if we could. That an action spontaneous is voluntary ; that release from pain is the effect of volition,—because it is agreeable to volition, and volition does necessarily precede it. And may we not finally refer the voluntary motion of the body, to the same mechanism of the nerves, under which we can easily reduce the acts of association and disease : drawing only this distinction between them, that pain precedes the one class, and not the other ; and shewing that the difference must lie in an accident, not in the essence.

The second case of bodily action, where there is no consciousness in the mind, and consequently no sensation either of pleasure or pain, was divided into two kinds : one, where a succession of movements is the result of habit ; the second, where it

proceeds directly from disease. With respect to the second, no one has ever conceived it to be under the influence of the will, except where the fancy is supposed to act,—and then it may be reduced under one of the former cases. Mere bodily convulsions, such as those which precede death, which are consequent on strokes of paralysis—which sometimes occur during sleep—and which accompany attacks of epilepsy, and other nervous disorders; these are evidently the consequence of some disorganization in the system, which comes within the province of physiology: we have nothing to do with them. But the former class of mechanical motions, has been frequently represented as the subject of consciousness, and the effects of the will. Our daily actions abound in them. Half our occupations are carried on spontaneously by the body:—we dress, we eat, we walk, without thinking, or contemplating, or even knowing all the steps of these different operations. Instances still more striking are to be found in our employment of language; which, in nine parts out of ten, is perfectly mechanical. If the words, by some process or another, did not come of themselves, it is certain that we never could procure them in time to carry on conversation. Nothing is more common than to

talk, not only without attaching any meaning to our words, for this is the natural use of language ; that we may reason abstractedly, as algebraists calculate, by symbols, and symbols alone ; but without knowing that we are talking. In absence of mind, the fact is still more certain. In the case of rope-dancers, and practisers of sleight of hand, phenomena which great writers have referred to volition,—volition is perfectly inadequate to explain the process. But, as here we cannot penetrate into the minds of the performers, we had better look into ourselves, and we shall find dexterity as great and an operation as difficult and nice exhibited every day by ourselves, in the act of standing upright. It is well known, that to maintain the centre of gravity in the human body in its proper position, it is necessary to keep perpetually in play an amazing number of little bones and muscles in the ankle and leg. It is a process just as difficult intrinsically, as to stand upon our head on a rope. Children cannot do it ; nor even grown persons, who have been from their infancy confined to a lying posture. Now, I ask, are we aware of what is going on—of every minute change which we are supposed every instant to make in the position of our muscles, when we keep ourselves from falling to the ground, as we

assuredly should do, if any one of these changes was intermitted? Or is it a question, at which a common man stares with surprise, as supposing a difficulty, and a case of whose existence he is totally ignorant? Is it not clear, that in this instance, as in all other instances of habit, we run into trains of movements, as into trains of ideas, without any exertion of the will. The former awake no consciousness. Why? Because they are independent of the mind. The latter are always perceived: and their very essence implies that they are so. These are states of body, those are states of mind; the recurrence of both is equally independent of volition, and equally dependent on the body: but volition or sensation is necessarily involved in the one, and not so in the other. In both cases, the association is formed in a great degree by pleasure and pain in the primary stages of its growth. In bodily movements entirely. It is the dread of falling, the pain that ensues from it, that puts the body of the child into motion. Now, if the will were the spring of these movements, it would assuredly exercise a volition upon the act of standing firm; and the greater the fear, the stronger would be the volition: and if by willing we are able to walk, by willing we should be able to maintain

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the scenes as they appeared, and fancy ourselves in possession of the ropes which moved them, and found that they came as we desired; or if even this last alone was the case, and our wishes were constantly followed by something to gratify them, we should assuredly imagine that all the action on the stage was subservient to our volition. It is precisely such a combination of circumstances which has impressed on us the general belief that our will moves our bodies. From custom, we foresee the movements: we know of no interval between the mind and the body. And as no action of the nerves produces conscious and voluntary motion, but one which is painful, either absolutely or negatively, it is perfectly impossible that what we term voluntary motion, should not necessarily be agreeable to our wishes. Such is the state of a common mind. But when we look more narrowly into ourselves, we find, that originally it was utterly impossible that we could have foreseen the changes; that even now there is a gulph between the body and the soul, which we cannot bridge over; that the cords and pullies which we conceive to be in our hands, are mere illusions, totally detached from us; that of the real springs of motion we have no knowledge, and consequently no management; and,

that besides those motions which give us pleasure and pain, there are an infinite multitude of others, carried on with greater regularity, apparently by the same machinery, and even in those which we talk of, as subjected to the will, a very considerable number which do not respond to their master, and which go one way, when the will goes another. So that he who would convict of absurdity a child that imagined a drama to be created and acted by his own volition, must, on precisely the same grounds, prepare to allow that we have no reason whatever to assign the motions of our bodies to the action of our minds. How it is, that those movements, which at first are attended with consciousness and pain, become by frequent exercise mechanical, and free from sensation, is another question. A rope-dancer, at first, is aware of every movement; he inclines to this side, and the pain of alarm sends him at once to the other; very probably, too far—perhaps, to the ground. By constant practice he becomes less timid—frequent falls have caused but little pain; his nerves become more steady, and his muscular action more regular. Those movements, which have maintained his position, are repeated again and again, till they come naturally and insensibly: and, at last, he goes through

a whole series of the minutest muscular actions, without being conscious of one. Now it is a very important consideration, and one which, in fact, is decisive of the whole question, that what we call consciousness of motion, is no such consciousness at all ; it is the consciousness not of the moving body, but of the effect produced in the mind by the action of that body, on some other nerves. If it were not that as the nerves act upon the muscles, so the muscles act again upon the nerves, we should no more be aware of a single movement, than a man who should fall out of bed in his sleep, and not be waked by his concussion on the floor. If this be not sufficient to settle any doubt as to the influence of the mind upon the body, I know not what is. The question then is resolved into this :—When is the mind insensible ; and what is necessary to produce sensation ? And here there is no great difficulty : for there must be nerves to act upon—avenues to them open ; and, besides this, a certain length of time to produce the change on which sensation is consequent. It is perfectly acknowledged, that a certain duration on the action of the nerve is essential not merely to recollection, but to consciousness ; and, if this be true, the rapidity of the movements in the rope-dancer, the minuteness and number of

the changes in our own position, when standing, will account for the absence of consciousness as easily as the closure of the eyes during sleep will explain our ignorance of surrounding objects; or the direction of the senses, in one limited quarter, will necessarily lead to the errors of an absent man. The rapidity is the natural consequence of frequent repetition, and is reducible under the law of association.

To sum up the whole argument in a few words. It would seem that all our movements arise from one of these causes : either a particular state of nerves, which we find is accompanied with pain ; or the action of the same nerves repeating habitual changes ; or some disorganization in the body, which we are not called on to explain. Precisely in the same manner every affection of the mind may be traced to three sources : either an actual impression on the senses, or past association, or a supernatural influence. That this law of association is a mechanical material law, not acting on the mind, but on the organs of sensation, is at least a plausible conjecture. We do not find that two distinct trains of sensations in the mind and motions in the body can run on well together ; which would be frequently the case, if both the sentient substance, and the organs which affect it, were

severally governed by the same law. The question is one of importance, since it possibly would include a demonstration of the separate existence of the mind. But this is not the place for so wide an enquiry; and it will lose much of its interest to those who are perfectly indifferent whether the mind be material or spiritual—whether it be a self-existent substance, or only consciousness super-added to an organized system,—who feel that in neither case are we removed one degree from the fear of its destruction after death, or brought one degree nearer to the hope of immortality; and who think it absurd to argue where the premises are beyond our conception—foolish to attempt a proof where proof is impossible: ridiculous to argue gravely against a negative conclusion drawn from a negative premise, and sufficient to rest all our hopes on the wants of our unsophisticated being, the analogy of experience and nature, and the promise of a certain revelation.— (*Vide Appendix. B.*)

If the preceding sketch of the human understanding in the collection of knowledge, be correct, it is evident that reasoning is nothing but the repetition of previous associations; that it is demonstrative only when each successive link is included in the one which preceded: that this can never be

the case but in words ; and that, consequently, without language there could be no reasoning, strictly so called. It is also evident that in all practical cases, where we are left to act upon mere probability—that is, where the connexion between the ideas is either uncertain, or dependent upon others—there our belief and our conduct are invariably and necessarily directed by the state of our inclinations. In this consists the principal point of union between moral and intellectual excellence. But reasoning in a more limited sense is applied to that process alone by which, when two ideas are presented, not naturally or commonly connected, we ascertain that connection by tracing out the intermediate series of links. Whether such a novel proposition occurs to our own mind by fortuitous association, or is to be received from others, or to be conveyed to others, it is necessary to make it fall in with our natural train of ideas by bringing it into their circle. How then shall we attain these new combinations ? and how, when obtained, shall we proceed to their proof ? In general, originality of thought is considered as an intuitive faculty, a gift of nature, which cannot be communicated by education, or improved by art. This stumbling as it were upon new conjunctions, which

we are too apt to call affectation in common life, quaintness and oddity in conduct, madness in morals, paradox in philosophy, and heresy in religion, is, to a certain degree, the work of chance ; and thus far it is susceptible of no regulations, except that, when chance has thus favoured us, we should carefully register the fact, and pursue the enquiry. It is probable, as we have before remarked, that every man has nearly the same proportion of novelties thrown in his way, and it is only the want of observation which prevents all from being equally benefitted. There are however two ways in which we may attain this excellence ; and if adding to the stores of human knowledge be the end of the human intellect, this excellence is higher than any. One, by pursuing as far as possible those trains of thought which most men are content to cut off with the necessity of the moment ; and the other, by a quickness and acuteness in the application of analogies. This second is by far the most fruitful source of originality. It is very probable that our train of reasoning, though prosecuted connectedly to a greater length by us than by any other person, may have been previously followed up by portions and detached series. So also the perception of similarity is common and familiar to all. But the

perception of proportion, as it requires more minute observation, a greater grasp and range of thought, and a more powerful imagination to embody mere abstraction, is a rare and admirable faculty. To acquire it we must form a habit of examining the relations of things, instead of simple conjunctions or actual resemblances ; and of then applying the two cases to each other, inferring what is deficient in one from what is ascertained in the other, and tracing out the points of coincidence by a careful and legitimate hypothesis. To illustrate this by a single instance, let us take a case in philology, where, I believe, the analogies to be cleared up have never been observed, and may consequently appear novel. It is evident in the Greek language that the verb is the same as a substantive, or adjective, with merely the additional notion of time superadded. Now we find the noun susceptible of certain inflexions, and the verb likewise. But the precise meaning of these inflexions is ascertained in some points, and in others not. Considering, however, that those of the noun stand to the noun in the same relation as those of the verb stand to the verb ; and that, in both cases, we trace back their origin to the same framers of the language, let us put them side by side, and examine

whether by mutual assistance and inference we may fill up the plan satisfactorily on both sides. The inflexions then of the noun, are those of number, gender, and case. Those of the verb are number, person, mood, tense, and voice. Three of these will be sufficient for our purpose. And let us enquire whether, by placing the gender and cases of the noun parallel with the voice, tense, and mood of the verb, we may not throw some light upon an interesting subject. There are three kinds of verbs—active, passive, and neuter ; and three genders—masculine, feminine, and neuter. Might not this, if pursued, explain the principle which conducted the Greeks in their apparently arbitrary designation of objects by particular genders ? Again : there is a nominative case in the noun in its primitive form, employed to express an object considered as independent, or as first in relation to another. The second object connected with a former, is expressed by an inflexion of the nominative. So also we find an original form and an inflexion of the verb, which we denominate moods, the indicative and subjunctive. I mention two only, because the imperative requires no illustration, and the infinitive is in all cases a noun. And that which is most absurdly termed the opta-

tive mood, is made up of certain tenses of the subjunctive. But as the inflexion of the noun stands to the nominative case, may not the inflexion of the subjunctive stand to the indicative? The one is employed to express the second of two substantives observed in connexion with each other. May not the other express the second of two actions or affections, or states of being, considered as cause and effect? that is, in invariable connexion. Again: there are three principal cases in the Greek declension, and no one has ever presumed to settle their exact signification. But in the verb we have also three classes of tenses; one, in which the idea contained in the verb is considered as whole, perfect, and possessed of unity: another, where the same idea is considered as imperfect, commenced, but not yet finished, and continuing to recur to the mind: a third, where the idea is conceived to be inceptive, or about to commence, as if looked forward to through a vista. Let us apply these three significations to the genitive, accusative, and dative cases, and ask ourselves whether the genitive does not invariably express an idea, full, perfect, complete, presented but once to the mind; the accusative as invariably an idea recurring again and again; and the dative, the same idea placed before

us, at a distance, as a point towards which motion is indirectly proceeding. This is not the place to shew that all these analogies, and many others of equal importance, do really hold good. But the instance is mentioned as illustrative of analogical discoveries; and drawn as it is from philology, it is peculiarly applicable in the present enquiry. The modes then by which we may principally hope to light upon new combinations, are accident aided by observation, the prosecution of our associations, as far as they will lead us, and the investigation of analogies. In no case is the process, when once explained, above the comprehension or practice of a single individual. It is quite as mechanical as the grinding a barrel-organ, or handling a spade or a sword. There are, however, certain moral qualities which are peculiarly necessary in our search for originality. A man must learn to look with less reverence and awe, not on the wisdom of his forefathers, but on the accumulated wisdom of mankind. He must learn to appreciate justly, not the ignorance of any age, or country, or sect, but the ignorance of human nature in general. He must be prepared to take nothing upon trust which it is worth while to investigate himself. He must be diffident, but bold; speculative, but honest;

resolved to sacrifice his all to the attainment of truth ; steady against obloquy and ridicule ; and equally steady against the undue fascination of novelty and paradox. One single sentence would sum up all these excellences. An earnest and ardent love of truth, an abhorrence of all deceit, whether of others or of ourselves, and a most firm and unshaken conviction that truth and good are as strongly bound together by one great law as falsehood and evil. Such a state of mind is not often met with, and its rarity is nearly proportioned to the rarity of original invention. When, however, we have obtained a new hypothesis, what are the means by which we must endeavour to establish it ? It is evident that when our new position is reached by synthetical reasoning, our proof is coexistent with our discovery, and the discovery can scarcely be termed an hypothesis, unless suspicion of our own accuracy engender a doubt. In the two other cases of fortuitous combinations and analogical inferences, we must employ what is usually termed analytical reasoning. This analysis, it must be remembered, is quite distinct from the process which has been already traced out under the same name. And the employment of the same word to denote two distinct operations, has perhaps

resulted from certain metaphorical senses of the Greek roots. In the former case, the object was to discover the cause of a given fact. Here the object is to establish a supposed fact. There is however another method of explaining a confusion of terms, which, more than any other, has embarrassed our thoughts upon reasoning. We say that a physical antecedent is the cause of a physical consequent; and that the premises of an argument are the causes of the conclusion. With what propriety the same notion of causation can be applied to the relation between two unconnected things which are only brought together by experience, and to the relation between a whole and its part, it is not for us to enquire. The inseparability of the one case, and the inseparativeness of the other, appears to be the point of similitude which has led to this mode of speech. And it is evident that whether by experiment we apply a cause to obtain its effect, or follow up our premises to their most distant conclusions, in this sense of the word cause, we are arguing from cause to effect, and the term synthesis is applied to both. The word analysis is applied on the same principle to the two corresponding processes, in which, an effect being given, we endeavour to discover the cause; and a

conclusion being arrived at, we infer from it the truth or falsehood of the premises. In both we may be said to argue from effect to cause. Why it is more easy to ascertain the reality of an hypothetical conjunction by analytical than by synthetical reasoning, is evident from the following consideration. In a process of synthesis, we take some acknowledged position, and work downwards, tracing out all its results, till we arrive at the one for which we are searching. But what position are we to take? And when so many radii of thought are branching out in every direction, how are we to be guided in our choice? The case is similar to that of a man who, without having the direction of a house, is placed before ten cross roads, by one of which he is to find out his way. In analysis we take the hypothesis as a principle to start from, and follow out all the deductions which flow either from its affirmation or negation, till we fall into some one or another which is known to be true or false. We are placed, to use the illustration of a celebrated writer, in the centre of a circle, and we can work our way out by any train of ideas which we choose to pursue. It is evident that these trains of consequences, to be logically inferred, must be included in, or invariably con-

nected the one with the other ; that we can only be supplied with them by previous association, and that the operation is as much within the power of every understanding as any mechanical handiwork. But it may be worth remarking, that this kind of reasoning is beset with fallacies. In synthesis we are gradually led on, without knowing whither we are going ; interested in nothing but the careful arrangement of our ideas, and not biassed by any presumption in favour of conclusions which are hidden. But in analysis we have, first of all, an hypothesis which in general we are anxious to support. Every one is aware how soon a position, first presented as a fiction, winds its way into our belief ; and how secretly we are led on to embrace the defence of that which has been familiarized to the mind. Secondly, we have great caution to observe in the connection and formation of our series ; but with many temptations to neglect it ; first, from a zeal for our hypothesis, and then from an impatient desire to reach a conclusion which is to terminate our doubts. Thirdly, the validity of the argument depends also on the certainty of our conclusion. And this certainty is liable to the same errors in proof, and the same difficulty in maintaining, as the original question. And

fourthly, the whole process is illogical, except in mathematical reasoning. There, indeed, each successive term being included in that which preceded it, if we arrive at one which must be included in our first, if the hypothesis be true, but is not included in it to our actual knowledge, the argument is perfectly cogent, since if A does not include C, which is included in B, A cannot include B. If a man is not possessed of five pounds, he cannot be possessed of ten. If a bottle will not hold a pint, it certainly will not hold a quart. Otherwise, the same thing could be, and not be, at the same time, which is an absurdity.

But in reasonings upon matters of fact, where the ideas are merely connected with each other, this is not the case; there is no absurdity in supposing the connexion to be broken and the succession altered, whether we allow or not the existence of an agency distinct from nature.—And in cases where this agency may be conceived to operate, the validity of our argument is gone at once. This is equally true, whether our reasoning be affirmative or negative; whether we attempt to shew that the position is true by the truth of the results or by the falsehood of its contradictory: that falsehood being previously ascertained by the falsity of its deduc-

tions.—In the first case the results may be true without the premises : This is a stone, for if it be one it will fall to the ground—and it does fall. And yet deviations from our common experience are perfectly conceivable, and even have been known to exist, in which the effect might follow without the cause. The body might fall though it were made of feathers. And so also in the second case : rain must have fallen ; for without rain the roads would not be wet : and yet some other circumstance besides rain might have caused this appearance. In short, till we are quite sure that an effect cannot be produced by two distinct causes, we have no demonstrable right to confine it to one. And if we do not confine it to one, the whole cogency of analytical reasoning in practical matters is entirely destroyed.—A curious instance might be adduced of this fallacy in the so often repeated arguments to prove against Calvinism the free will of man. Whatever be the errors of Calvinism, and they appear to be many and gross, they are not to be refuted by such an analytical argument as this. Man is a free agent : for if not, he ought to become acquainted with his real situation. But this would destroy his activity, since no man acts when he believes himself totally subjected to the power of

another ; but that the increase of knowledge should produce a stagnation in human affairs is contrary to the design of Nature, who has willed that knowledge should be increased, and yet the world be filled with action. The conclusion is absurd ; consequently so is the premise, consequently, man is a free agent. Imagine however—merely imagine the possibility of some other influence acting on the human frame, and stimulating motion independently of the reason, and the knot which is so artfully tied, is loosened at once. The very existence of a Deity distinct from Nature, or the bare supposition that Nature may not be so stable as we conceive her to be, and that our experience of the past may not extend for ever to the future, would sweep away the whole argument at once.

And if this principle holds good in cases where the connexion is permanent and uniform ; what must it be where the same connexion is slight and vague. And how carefully ought we to examine an argument which would prove an hypothesis solely from the consequences to which it may lead. Nothing is more common in practice than such reasoning, and nothing more fallacious. Employ it indeed we must, for frequently we have no other guide ; but, like all other operations of the intel-

lect, it is necessarily very imperfect, very liable to error, and depends for its direction more upon the inclination of the mind, than upon any intellectual intuition. We adopt the conclusion because we like the premise ; we assume our hypothesis, and then run to any lengths, rather than abandon a favourite notion, or expose ourselves again to the pain of doubt and hesitation.

Thus far we have endeavoured to trace out the progress of the human mind in the collection of knowledge. We have seen that it is acquired either from the information of others, or by our own discoveries. That it is divided into two great provinces,—hypothesis and experience. That the former is a creation of the fancy ; beautiful, amusing and solid, so long as we choose it to exist ; but ready to vanish in a moment, at a single exertion of our will. That the latter has an actual substance, as far as regards our own perceptions. But that these perceptions cannot be demonstrated either to ourselves or to others, being the *ultima Thule* of our reasonings. That they constantly imply assumptions relating to the past, to the future, and to an external world ; not one of which can be demonstrated ;—demonstration conducting us only from a whole to a part, and our conclusions in matters

of fact being totally different from our premises. We have seen also, that our belief in all such conclusions, depends mainly, if not entirely, on our inclinations. That where consciousness does not exist, the slightest testimony will be sufficient to convince us of an indifferent fact; and no testimony whatever be adequate to prove one that is abhorrent to our wishes: that any deviation from our ordinary experience will necessarily be improbable and doubtful, but that this improbability and doubt are not qualities in the fact itself, but states of our own mind, produced, and entirely produced, by the universal principle of association. We have also endeavoured to explain the mode in which nature seems to drive us on to action, notwithstanding the ignorance which envelopes us; and in analyzing the two kinds of discovery, employed, one in the investigation of causes and effects, the other in the proof of hypothetical facts, we have seen how limited is their sphere of operation; how liable to fallacies and errors; and how completely they leave us at last the slaves of conjecture and chance.

But if this be a correct view of the human intellect, and I have not wilfully erred in any statement, there must crowd upon every reflecting mind many most important considerations. If all our

reasoning, whether in discovery or proof, be but a process of association, conducted for us by an unerring nature, and subject to laws over which we have no controul, what is the difference between reason and instinct? Can our intellectual powers be the grand distinguishing feature between man and brutes? Do not brutes associate as well as men; and is not our superiority over them derived, not from any mysterious spirituality, but from the use of language, which enables us to retain and transmit our knowledge, besides answering many other most important intellectual purposes? Again, if all our intellectual reasonings are thus either based upon fiction, or subject to doubt, can our understanding furnish us with our perfect and genuine happiness? Can Truth, which it is impossible to attain, constitute our supreme good? Ought we not to treat our reason solely as an instrument, an imperfect instrument of human happiness?—Should we not be as jealous of its abuse, as active in its cultivation? And, above all, would it not be wise to recognise the pettiness of the circle in which we are able to move; to doubt our knowledge; to suspend our belief; to dispute the validity of experience whenever it is practicable to do so, without injury to our positive interest?

Far be it from us to overthrow the basis on which all the science of the age, such as it is, has been firmly and permanently rested, when compared with the futility of theory. Far be it from us to deny that experience is the best guide which we possess practically to conduct us through life. But it is one thing, to grope about at midnight, with a feeble, and just sufficient light,—and another, to imagine that its rays are equal to the fullness of noonday. It is one thing, to support ourselves in swimming on a fragile and solitary plank,—and another, to plunge with it in a whirlpool, as if there also sure of its support. Six thousand years have now passed since the present system of things has commenced. In that time how many myriads of facts have occurred, of which we are totally ignorant! How few have been transmitted to us at all; and how many, even of these, incorrectly! And yet, within a single hour, with a little fire, and a shaking hand and a dim eye, with the past and the future buried in darkness, and but one ray of light striking faintly on the present, we fancy that we have gained the key to the unbounded treasure-house of Nature; that it lies expanded before our view in all its grandeur and immensity; and that what has been, and will be—

what is known and unknown ; all the unnumbered varieties of combinations ; all the infinite possibilities of things are revealed to our prophetic eye. This has been, because we have seen it :—this cannot be, because we have not. This will be, because it has been already :—and this will not be, because as yet we know not that it has been. Surely, surely, if this be reason, the boasted prerogative of man, the seal stamped upon him by his Creator, the proud and glorious pre-eminence from which he looks abroad upon a subject world, lifting up his arrogance to the clouds, and trampling upon myriads of animated beings, as wise to their own good, as useful to the universal scheme, as happy in their own humility, and ten thousand times more innocent than he is, then the bounty of Nature is nothing but a mockery and a snare. To play with words, to guess at the future, this is the enviable dignity which raises us from the brutes that perish. And a fearful compensation we make for the possession of this glittering bauble ;—fearful in the pains, and guilt, and responsibility of our being ;—fearful, a thousand-fold more fearful, if it tempts us to be intoxicated with pride, and throw off all the coverings of our nakedness, and stand forth in the sight of men and of angels, like a

wretched fantastic ideot, glorying in his shame, and calling his rags purple, and his fetters chains of gold ; and thrusting away in disdain the hand that would place him in comfort, lest his dream of pride should be broken, and he should wake to the consciousness of his misery. Better, far better, were it, to give back our reason to its Author ; and casting ourselves for protection under his hand, who clothes the lilies and feeds the ravens, to content ourselves with the enjoyment of the passing hour : without fear for the future, or sorrow for the past, knowing nothing but the hand that feeds us ; and delighting in nothing but the sympathies and affections of our nature.

It must be that we have something in our being nobler and grander than our intellect—that the charities and sensibilities of our hearts, have more in them of Heaven than our reason,—that the peasant at his plough is as near to the perfection of essential good, as the philosopher amidst his books—that all the wisdom of all the world, weighed against the single desire of being useful to mankind, is light as a feather—and that man has not inherited alone the bounty of Nature, and the elements of happiness, but shares them with all animated beings ; it may be in a greater proportion, or in different relations, but the same in essence, indissoluble in

union, equally augmenting and augmented, and flowing all into that great tide of sentient being, which covers the whole surface of nature; and in which, with all our dignity, we form but a portion now; and may form but a portion hereafter.

Having now examined the mode in which we acquire our ideas, we have next to observe, what is the best method of arranging them, so as to facilitate the process both of discovery and production. As the object of discovery must be either the cause of an effect, or the effect of a cause, or the existence of a fact supposed, (at least every other curiosity is nugatory and idle, and the most decisive characteristic of a frivolous mind) so we shall find, in each of these cases, that three principles of association are requisite. When the cause is given, with the opportunity of trying the experiment, nothing further is required. When that opportunity is wanting, we must take a similar cause; and observe what its effects have been. When the effect is given to ascertain the cause, if the former be cognizable by our senses, or minutely discoverable by description, we must analyze it fully; by enumeration as a matter of fact, by definition as a verbal proposition.

The insulation of the essential antecedent by subsequent experiments, demands likewise many

similar cases. And in the analytical enquiry into the truth of an hypothesis, the association of cause and effect is necessarily required. Thus there are three main principles on which our ideas must be arranged :—Causation, Similarity, and Definition. Nothing is so indicative or productive of mental imbecility, as the custom of stringing together a number of facts on the single relation of time or locality. An idle and frivolous mind is always impressed with mere external conjunctions. From want of thought it is glad to be amused with objects which strike the eye without effort ; and from merely wandering about, without end or selection, the sight collects a number of minute particulars, which dwell as forcibly on the memory as the most curious and important associations. An admirable instance of this habit has been frequently quoted from Shakespeare :—

“ Thou didst swear to me,” says the Hostess to Falstaff, “ upon a parcel gilt goblet, sitting in my Dolphin chamber, at the round-table, by a sea-coal fire, upon Wednesday in Whitsun-week, when the Prince broke thy head, for liking his father to a singing-man of Windsor ; thou didst swear to me then, as I was washing thy wound, to marry me, and make me my lady thy wife. Canst thou deny

it? Did not goodwife Reed, the butcher's wife, come in then, and call me gossip Quickly? coming in to borrow a mess of vinegar; telling us she had a good dish of prawns: whereby thou didst desire to eat some. Whereby I told thee they were ill for a green wound, &c."—HENRY IV.

Even this kind of association, however, as it indicates attention, though attention misdirected, is not so contemptible as the total want of observation, conspicuous in some minds. There is about it a restless busy meddling curiosity, which might be diverted to a better purpose. There is a principle of motion, which in the other case is totally wanting. Even local relations will seldom combine in the memory of an inert, dull, and sluggish-minded man: and when he is compelled to learn, he will have recourse to time, as the string on which to thread his series of separate facts. His chronological dates will be perfectly accurate: summers and winters, battles and sieges, will follow one another in the most regular succession. He will get up Euclid by heart: and all this laborious process, painful, and tedious, and useless, as it is, he will take, to avoid the trouble of connecting his ideas on the principle of causation;—or rather, because he is ignorant that any such principle exists. If,

however, any one wishes to know how much more easy it is to arrange and retain ideas upon this principle than on that of chronological succession, there is in the first book of Thucydides a most admirable field for the experiment. Let a student read the summary given by that historian of the Grecian history, between the Persian and Peloponnesian war, and collecting nothing but the facts as they occur, the strongest memory will sink under the operation. Let him apply the party-politics of Greece as a clue to explain their nature, and every one will fall into its place in the most easy and natural order, and be permanently fixed in the mind without effort, and without delay. It is, however, needless to enlarge upon the absurdity of knowledge like this : the difficulty and misery which attends its acquisition is balanced only by its uselessness and instability ; and every encouragement which is given to it is pregnant with the most mischievous consequences : since it not only spreads a distaste for the attainment of knowledge in general, in minds of an inferior cast, but diverts into a wrong channel those which are capable of higher occupations.

With respect to the arrangement of ideas upon the principle of similarity, it may be observed, that

a dull heavy man, from want of attention, can never act upon it. The perception of similarity of course implies observation ; and his observation, if ever, will be roused more by deficiencies in his anticipations, than by their fulfilment. To a stupid man, therefore, every thing which is new is absurd. The difference is perceived, and not the resemblance. The same class of minds which busy themselves with local relations, will also be quick-sighted observers of superficial similarity. They will associate their ideas by single qualities. Black things will be put together, and white things together. This man will be the image of that man, and every object which they see will remind them of another like it, which they have seen somewhere else. Such minds, from a natural restlessness and want of occupation, have just sufficient attention to play about upon the surface of things, but they glance off from it again at every instant, without dwelling sufficiently long to go beyond it.

Such is evidently not the principle of association which will assist us in discovery. We must associate facts, instead of qualities ; combinations of ideas, instead of ideas singly. If an ignorant or thoughtless man had been lying under Newton's tree when the apple fell, the apple, in all probabi-

lity, would have reminded him of some other apple, the blow of some other blow, or the tree of some other tree ; and this would have been all. Newton's attention was caught by the conjunction of the falling apple ; and it led him on to other conjunctions of moving bodies ; and the principle which regulates, or, if we choose to call it so, the cause which produced one, he applied to the others, and it was thus that his discovery was made. So also in the case of specific gravity : every man, before Archimedes, had seen water run over the side of a vessel when another substance was immersed in it ; the fact was as common, and as naturally anticipated, as that fire would produce heat : but it was the quantity of the water, and the depth of his immersion, together, which struck the philosopher. Was the proportion universal ? other experiments were suggested, and the principle was established.

Every man feels a pleasure in contemplating beautiful dancing, or to take a simpler instance, in hearing rhythmical music. Every man also is delighted with the discovery of truth ; and not less so with the beautiful simplicity of Grecian colonnades. The pleasure is all that is perceived by most minds. But let us fix together the sensation and the object. Dancing causes pleasure. Not

all dancing, as a careless thinker would infer : for, on looking out for a similar conjunction, we find that some dancing does not produce it. But what kind of dancing ? that which is rhythmical. And what is rhythm ? the succession of sensations at equal intervals. But there is in a Grecian colonnade a similar succession, and a Grecian colonnade is highly beautiful. But why is such rhythm agreeable ? evidently because the mind is satisfied in the fulfilment of its anticipations. But there is just such a fulfilment in the discovery of truth, for if there be no anticipation, there is no pleasure, at least none essentially connected with the investigation of truth. And thus, by bringing together similar conjunctions, we might gradually pursue the enquiry, till we arrived at a simple principle of our nature, which might be employed as a key to explain the cause of beauty in ten thousand objects, which now lie before us in a crude undigested mass ; apparently incapable of analysis, and impossible to classify. But to arrange and combine our ideas in this manner requires nothing but attention. And attention is entirely dependent on the interest which we take in objects. The attention of a man, whose whole life is spent in field-sports, is just as much awake to the paces of his

horse, or the pointing of his dog, as Newton was to the fall of the apple. Without such interest we shall never dwell upon surrounding objects ; without dwelling on them we can never connect the forms in which they combine ; and without connexion they will be perfectly useless.

It may not be useless to add, that there is a class of minds whose attention is too acute, and their perception of similarity too refined. They string together their facts by very subtle and remote analogies, and become wits rather than reasoners. Nothing is so tempting as analogy to an impatient and speculative mind. It is always specious and amusing : for it falls in with our general notion that there is a certain mysterious unity and simplicity in the operations of Nature. We are delighted at the thoughts of being able to take the whole machine to pieces, and put it together again, by a single turn of the spring. It also saves the necessity of calculation, and calculation is a disagreeable obstacle in the way of leaping to our conclusions. We are, in general, too fond of our conjecture, willingly to be assured of its falsity : and there is scarcely any trial of moral fortitude so great, as the surrender of an hypothesis to the results of experience. An instance of such surrender

is the most glorious trait in the whole intellectual character of Newton. In the pursuit of analogies, the following principles are perhaps our safest guides. That they are admirable in illustration ;—conclusive to the few results which are immediately involved in the relation ;—and probable exactly in proportion as they cease to be analogies, and become similarities. One case may perhaps be stated, as valid, without this exception : where, without any actual resemblance, there is an identity of origin. If design, a fixed, general, and unwavering design, can be attributed to the agency which has produced both parallels, we may undoubtedly employ them to illustrate and confirm each other. The reasoning is legitimate, though not demonstrative : and in the celebrated Analogy of Butler, his forbearance to lay a stress upon this point, because it was not demonstrative, is even a greater proof of a powerful mind, than the arguments to which he has confined himself. His silence is more wonderful than his eloquence.

The third principle of association is that of description or definition : description as applied to physical objects ; definition as applied to words.—And here as before we may observe a marked distinction between common and powerful minds. It

is evident that a minute enumeration of all the accidents and circumstances of a fact is perfectly useless, except when employed as an analysis to develop the cause, as a pattern for future experiments, or as a cause itself to produce some subsequent effect. The end in view must therefore be our guide in selecting the circumstances to associate. Now, a stupid man combines nothing : an ignorant man many things, but without any principle of classification. His stories are what is vulgarly called *rigmarole*: his analysis, where the fact is before his eye, a mere collection of circumstances, some useless and some essential, and some accidental. And, as before observed, we should all of us associate in a similar way, where we had obtained no prior experience to lead and concentrate our attention. If Newton had been called on to detect a thief, without any previous thought on the subject, his enumeration of circumstances would in all probability have been just as frivolous as that of a countryman giving evidence in a court of justice without knowing the nature of a trial, or an invalid describing the symptoms of his disorder without the slightest knowledge of physic or anatomy. And that we do find a superior mind equally sagacious and acute, in general, whatever the subject of

enquiry may be, arises from the fact, that a constant habit of observation and thinking leads us unconsciously over so wide a surface of human affairs, that we can seldom meet with a case which has never been encountered before in some shape or another ; or in which we are totally unprepared either with a particular experience or a general principle.

With the end then of our enumeration kept steadily in view, and the circumstances which conduce to that end selected by the help of experience, we shall never be in danger of overloading the memory with a multitude of useless facts.—Every feature will tell ; and instead of throwing together a mass of heterogeneous particulars, tiresome to ourselves and others, and containing perhaps but a single grain of valuable information, we shall be terse, forcible, and if we may borrow a Latin expression where our own language is deficient, enucleate in all our associations. It is needless to observe the importance of this selection, in poetry and oratory. But the same rules are applicable to every case of narrative.—The power of imagination or fancy is nothing but a faculty of associating together those ideas only which are homogeneous, and conducive to the same effect. These ideas are previously ac-

quired by observation ; and that observation has been directed by the peculiar bent and bias of our pleasures. If Locke's mind had been naturally inclined to delight in external beauty, or in the energies of passion, he would undoubtedly have been a great poet. If Milton's genius had been more cold and subdued, he might have written Newton's Principia, instead of the Paradise Lost. It is the moral inclination of the mind which directs the study. The means of pursuing it successfully are the same in the Poet, the Wit, the General, the Philosopher and the Orator.—It was the same principle which guided the mind of Cicero in the construction of his beautiful narrative in the speech of Milo, and the fancy of Milton in combining the landscape of Paradise ; Shakspeare in the creation of Falstaff ; and Hannibal, in the arrangement of a battle, acted by the same law. The sagacity of neither was intuitive, or any thing more than may be obtained by every individual who is equally extensive in his experience, and discriminating in his observations.

One remark remains to be made : since our only object in associating ideas permanently in our memory, is with a view to their subsequent employment in production, we should never burden our

minds with those groupes which do not appear capable of subserviency to our general ends ; and as we never, in this shortness of human life, and narrowness of experience, shall succeed in any one end, unless we concentrate upon it the whole powers of our mind ; we should confine both our attention and our memory to one fixed and not unlimited province. If we employed in Science the same subdivision of labour which we encourage in the arts, our improvement would be as great in the one as it has been in the other.—In Science, indeed, we need not rigidly restrict ourselves to one and the same dull route ; since every department of knowledge may throw light upon those which surround it. But when we depart from our peculiar field of research, and enter upon the territories of others, we should always bear in mind the interests of our own object. We should not invade a second Science, and take possession as a conqueror, but travel lightly over it, with a view to make commercial acquisitions which we may carry back to augment our own stores. The grasping ambition of knowledge is as mischievous to the world and as useless to the mind that encourages it, as the thirst for power or money. A man who has the fortitude to be ignorant, may very soon become wise. The

envy of knowledge is just as much the mark of a weak and petty mind, unworthily distrusting its own powers, and labouring solely for external distinction, as envy of any other superiority.

Whenever the emulation of others causes detriment to ourselves, it is a very pernicious stimulus to action. Emulation, indeed, we may feel ; but it should lead us, not avariciously to seize on the acquisitions which they have made, but to run a race with them, each in our own parallel. The authority of Greek names, added to the peculiar circumstances of the age, has led to an unnatural excitement in the pursuit of general knowledge.—Sir W. Jones is perhaps the man who injured his mind the least from the variety of his attainments ; but even he contrived to tie them together by some common principle of enquiry. Other men of whom we read, if their knowledge was more than superficial, have at least left behind them no discoveries of utility or magnitude. It is by patient, careful, and concentrated labour, that the boundaries of Science have been extended by men who professed but one thing ; who were not a little of this and a little of that ; with a smattering of philosophy and a smattering of criticism, and a smattering of physics ; but who took a wide and noble survey of the

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vast scene in which they were placed, and of the part which they were called upon to act. They cared as little for the possession of knowledge, as they did for its ostentatious display—except so far as it enabled them with propriety to discharge all their relative duties. But these duties they held to be sacred ; and they knew that their worthy fulfilment was incompatible with an excursive curiosity. Their view of human nature was grand and noble, for it was humble and just. Dissatisfied with any thing less than the full measure of their own capabilities, with this they were perfectly contented.—They were too rich themselves to be jealous of the riches of others ; and were as far removed from false shame, as they were from arrogance and pride. And when we of the present day shall attain this frame of mind ; and labouring each in our narrow but allotted portion, with all diligence and zeal, shall bring into one common store the accumulated results of our toils, not for invidious comparison, or to foster a contemptible vanity, but to amass, by our several efforts, a treasure for the whole human race ; when we shall learn to be content with a little knowledge, if that little be sound ; to feel delight that many have acquired what we have missed ; and that our discoveries have been

rendered superfluous by the previous discoveries of others : then, and then only, shall we set warmly, and fairly, and honestly, to work in the investigation of truth : then, and then only, shall we improve Science as it may be improved, and deserve the same immortality for ourselves, as we have conferred upon the wise who are gone. It is, perhaps, too much to expect that such motives can operate universally ; but as far as we are able, we are bound to encourage them. Avarice and cupidity have been very powerful engines in the augmentation of our national wealth : but we should have gained as much, or even more, if for these had been substituted a rational and well-tempered ardour for improving our mutual condition. And to continue an unnatural stimulus, which has no other merit than driving men on to an end, thoughtlessly and rapidly, and independently of our exertions, though at the peril of all which they pursue, is to act like the man who put a horn of gunpowder into the fire, in order to burn a string, rather than wait patiently for a knife.—The string was burnt off in a moment, but the gunpowder exploded, and the man was killed.

The association of accurate definitions with our words, is of even greater importance than the asso-

ciation of facts ; and should be regulated on the same principles. Any one who has been at Malta, must be aware that the currency of that island is composed principally of copper ; the pieces varying in size, according not to their intrinsic value, but an arbitrary standard : the inscription generally illegible, and every computation exceedingly perplexing. It is no uncommon thing, for a stranger to give a shilling to a beggar, mistaking it for a penny ; or to receive three or four sixpences in exchange for two-pence. Every one also who has thought an instant on himself, knows that our words are precisely like the Maltese currency ; that we employ them for an exactly analogous purpose ; to represent briefly, easily, and portably, a certain value in ideas ; and that owing to the mode in which nature first led us to coin them, and their perfect intrinsic valuelessness, there is as much confusion in their various significations, as in the shapes and sizes of the copper-money just mentioned. From what we have previously remarked on the subject of demonstrative reasoning, it is also evident, that it consists entirely in substituting either the whole, or a part of the actual value, for the sign of that value ; that is, in giving change for words. And hence we see one reason for associating with words their full

and precise definitions,—since without it, we can never demonstrate, or perceive the cogency of demonstration. But even our practical reasonings, are carried on for the most part by the associations of sounds. We string together words, because they have been strung together before. Our conversation, our writing—even our thinking, is nothing but a series of expressions, recurring as they have previously recurred. We borrow our style, our sentiments, and our opinions, from those with whom we live; not optionally, but by necessity. And thus error upon error is entailed upon thousands, unless we are rigid in examining the propositions which we link together, and careful in developing their contents.

Again, it is in general the novel conjunction, not of ideas, but of sounds, which startles men into doubt; and this doubt is so painful, the counteraction of our prejudices and habits is so humiliating, that we prefer clinging to error, rather than abandoning them to truth. One great cause of this reluctance to receive new opinions, lies in a mistaken principle of generalization, which syllogistic reasoning has most mischievously fostered. We are taught to lay down universal propositions, without discriminating the three kinds of universality—

that of number, of time, and of place. If I have twelve men in a room, and observe that each is dressed in black, I may infer, by the Aristotelic induction, that they are all dressed in black; that is, if I choose to take such useless pains, I may repeat the same thing in a different form of words. This would be a proposition universal in number—and it is clear, that the number must be defined, and accurately gone through without a single omission, otherwise my conclusion involves more than my premises. If I could follow the life of Socrates throughout every moment, and find that he was always wise, I might state this also in a universal proposition; and this would be universality of time. But if a single moment had escaped me, my inference is gone.

And lastly, if I determine that a sign shall comprehend a certain number of ideas, so long as my determination continues, those ideas will all be contained in it: and this may be called universality of place,—from which universality of time necessarily flows. And hence identical propositions are always expressed by the present tense. Any other kind of universal proposition we have no right to form—and never do form naturally, though we do in logic. An infant has tasted sugar, and the next

time he sees a lump of snow, he will expect to find it sweet: and, according to Aristotle, it takes a universal proposition. All things white and crystalized are sweet; this thing is white and crystalized, therefore this is sweet. But, is not this an absurdity? Does not Nature, by the instinctive process of association, lead us to expect similar effects from similar causes, without any reasoning at all. Do we not act perpetually upon this law, where, if we were to state the ground of our conduct in an universal proposition, we should be compelled to remain without moving? The fact is, that we reason from particulars to particulars: to-day is cloudy, and it rains; to-morrow, if cloudy, I expect will bring rain also. But as for any universal assertion, that all cloudy days either have brought, or will bring, rain, Nature, I am sure, does not supply it; and reason, immediately rejects it. The mischief of these general principles is this—that they tie us down to our prejudices, by pledging the future to the experience of the past; and extend our opinions over a wide range of unsurveyed regions, as well as that which we have actually traversed. Nothing is so useful to a careless indiscriminating mind: they save all discussion—all delay—all enquiry; and satisfy our long-

ings for certainty, just as well as mathematical axioms. No man objects to a modification of knowledge, which he allows to be partial; but, having once sunk an universal position, you must pull down his whole house before you can remove it. You must alter the foundation, not the superstructure; and the difficulty is proportionately increased. We have before observed, that the tendency to generalize, instead of being a characteristic of an excellent reason, is a natural defect; when not checked and controlled by perpetual caution. It is a very happy provision of Nature for the helplessness and ignorance of children and ideots,—and is necessary to all of us, as connected with our instinctive anticipations and reasonings. But the wiser we become, the more we limit, and narrow, and individualize our statements; and confine our general principles to such only, as are either identical with demonstrated premises, or involved in the hypothesis of language. And if we do occasionally venture to generalize conjunctions, it is only when we are combining very elementary principles; even then with a proviso for the hypothetical stability of Nature, and with all the qualifications which flow from a consciousness of our own imperfections. Now, if men were in the habit regularly of

associating with every word its exact complement of ideas, and perpetually substituting the one for the other, they would soon learn to distinguish propositions which are universal, because they are identical,—from those which have no such pretensions. It is wonderful how our prejudices would diminish, and our knowledge increase;—how much more open we should be to doubt, and consequently to truth;—how easily we should discriminate between an argument of facts, and an argument of words; and what a multitude of books might immediately be swept away from the shelves of our libraries, and saved from appearing in future.

Another great use of definition, is to supply us in a moment, with a certain number of radii of thought, when we wish to trace out the cause of an effect expressed in abstract terms. We ought to have them by us perpetually, as so many clues to direct our researches. What was the cause of the French Revolution? An exact definition of the word revolution, would instantly give us a number of ideas, which would serve as so many roads to follow till we arrived at the conclusion required. It is a ready-made plan, which throws all our researches into order; and thus makes them expeditious and easy.

But there is a third case, in which the advantage of associating definitions with our words is still more evident. The mere error of exchanging, in Maltese currency, three sixpences for two-pence, is, in itself, a trifle,—but, in its consequences, it may be very pernicious. And mere mistakes of reasoning may likewise occur, without any other mischief than ignorance. But our words are the signs of sensations, as well as of ideas; and sensations are the prompters to action. And if we couple the index of one sensation with the index of an idea, which should excite another sensation, we gradually, but irresistibly, destroy the whole of our moral principles. And this destruction is not the less certain, because it is necessarily slow and imperceptible. It must be imperceptible—for this reason:—That sensations follow on some words immediately, and on others, solely by the intervention of the idea. The proposition, that murder is praiseworthy, would immediately shock and alarm us; for the sensation attached to the subject, and that attached to the predicate, are both immediate and contradictory: the coalition would be impossible. That to kill a tyrant is praiseworthy, might easily slide into our belief. It is only when we analyze the subject, that our abhorrence is excited.

If any thing, the feelings connected with both the terms naturally harmonize : there is nothing to oppose the conjunction. And we should soon, if the proposition were common, be in danger of shrinking as little from the assassination of a person in power, as from the commission of the most virtuous action. Against such fatal combinations, definitions are our surest guards : they substitute other words, and with words, other sensations,—for signs, which arouse nothing but faint and indifferent feelings. They awake the attention to consequences, and accustom us to habitual carefulness, in watching round those principles of conduct which constitute the treasure of our existence. To put bitter for sweet, and sweet for bitter,—to call darkness light, and light darkness, is the natural tendency of our hearts ; and whether we use this language to ourselves, or to others—whether we communicate or imbibe these pestilential corruptions of truth—woe be to us, and to those around us, if there be no remedy in our thoughts to detect and neutralize the poison.

The last use of definition which I shall mention, is in cases where words are employed solely to excite sensations. The great utility of language, is the ease with which it enables us to reason and cal-

culate abstractedly, without recurring perpetually to the ideas themselves; just as paper-money facilitates our commercial transactions, by removing the necessity of producing the cumbersome articles represented by it. But this advantage is to a certain degree balanced by the habit which it commonly engenders, of remembering nothing but the words; of losing entirely the thought, and particularly the sensations attached to them: and the more common the words, the more natural and frequent their order, the greater is the danger. I am, of course, alluding principally to our religious services, which are intended purposely to excite and conduct through the mind, a certain regular train of associated feeling. How often it fails in this end, we need only enquire of our own hearts; and why it thus fails is evident from the preceding remarks. But when a habit, not perhaps of inattention, but of insensibility, is stealing upon us, or is already formed, the best method, perhaps the only mode, of checking it, is to substitute for the ordinary signs, a new developement of them which may present ourselves, and the circumstances with which we are engaged, not in a new relation, but in the same relation differently expressed. It is the expression which calls up the feeling: this

feeling cannot always be associated with one very commonly in use. The connexion will be gradually dissolved,—and then we should adopt another ; which having, in like manner, worn out its influence, may be dropt, and the old one renewed. We can scarcely appreciate without this consideration, the moral advantages resulting to us from the numberless synonymes in our language. To those who have never observed the mechanical operation of sounds upon the mind, the notion will seem frivolous and far-fetched ; but the possession of a number of words, and forms of words, secured by the circumstances of their first employment to the peculiar subject of religion, is an inestimable benefit, which we owe to our old Translation of the Scriptures. We are, in fact, rich beyond most languages in this respect. We have a language for religion—a language for poetry—a language for elevated prose—and another for colloquial purposes. It is as much for the interests of morality, as of good taste, that these should be kept perfectly distinct. To mix up and confound them together, as is frequently done in the present day, is a most mischievous error ; and its effects may be experienced in a moment, by those who observe their own feelings, when either this confusion is

made, or but one class of words, as in French, is employed for these different subjects.

Such then are some general principles to regulate the arrangement of our ideas:—the principles of causation—of similarity—and of description. I am not aware that their application to common purposes requires any very mysterious powers of mind, or any faculty which nature has not implanted in all with equal capability of improvement. Attention is all that is required: that attention we all of us pay to objects which excite our interest. Different minds, indeed, may take pleasure in different pursuits; and if there be any physical distinction, it seems to lie in this moral bias. But whatever direction we take, the same method of following our course is easily communicated to all, and will ensure an equality of excellence, though in different departments of knowledge. We have but one additional remark to make on the system of arrangement, and it relates to the mode by which we may keep our acquisitions ready for use whenever they are wanted. It is of little purpose to keep money in the Bank, unless we are able to draw for it; and the only means of drawing for previously acquired ideas, is to retain in our hands some other idea to which they have already been

attached : like a buoy, in the water, it will enable us to pull up as many fathoms of rope as we have chosen to sink. This idea, it is evident, should be one completely in our view,—if not, all is lost : if the buoy sinks, our cable is gone. The clerk who could never read except out of his own book, and the man who knew Virgil by heart, but could only repeat it by beginning at the first word, must have been just as much perplexed to get at their knowledge, as the person who is called on to unravel an entangled ball of cotton, to which there is but one end, and that end concealed in the middle. One method then of obtaining a command over our ideas, is to fasten them on to the end which we wish to attain, whenever that end is not likely to be lost itself. No one forgets how to dress, or feed, or warm himself; for the motions which lead to these ends, have been by habit associated with the wants, and these always recur when required. But it more frequently happens, that the end itself slips from our mind. We forget what is to be done ; and as no human power can recall an idea spontaneously, since such an exertion of volition would imply, that the idea was in the mind and out of the mind at the same time, we must take advantage of external objects and internal associa-

tions, and fasten the idea which we wish to retain in our controul, to as many trains of thought as we conveniently can ; and to the tangible and visible substances by which we are surrounded. The old woman, who ties a string round her finger to put her in mind of a commission, acts upon this principle ; and she wisely selects an object from which she is not likely to be separated, and which will perpetually occur to her. It would be well for us, if we employed this homely method on other more serious occasions ; if we attached those thoughts and sensations which ought always to be present in our minds, to the circumstances which follow us wherever we go ; if we took advantage of happy moments and intervals of good, to surround ourselves with an atmosphere of pure associations and feelings ; if we hung some innocent pleasure or high inspiration, not on mere places and times, from which we are frequently parted, but on our daily wants, our animal motions, the air we breathe, the food we eat, the body and limbs which are constantly before us,—*Cælum non animum mutant qui trans mare currunt*,—is true only of men who have acted on this system. Other men become different beings with a change of place ; the whole current and habitude of their thoughts is altered ;

and it is wonderful what benefit we might derive from our bodies, even from their meanest portions, if we employed them as frames on which to suspend our thoughts. There is no need of any analogy between the index of the association and the association itself: there is no such analogy in words, and yet we all know the power which they possess. And yet we might find in our corporeal systems many such, if we chose to examine them. We have many reasons to connect the most elevated thoughts, and the holiest feelings, with even our material organs. And such a judicious adaptation would do more to keep us straight in the path of morality, to preserve us against the danger of accidental temptations, and to make our whole life one regular progress from virtue to virtue—one whole unvarying state of innocence and happiness, than all the lessons of philosophy, or the threatenings of the preacher.

Since, however, it will be very useless to collect and arrange our ideas, unless we have the means of blending them together, so that the appearance of one shall drag all the others with it, just as the horse when put into the shaft, will contribute little to our purpose, unless we fasten the traces to the carriage; we may briefly enquire into those gene-

ral laws of association which have frequently been alluded to, and by which our ideas coalesce.

If a chord is struck by the hand, its vibrations, unless interrupted by a second external impulse, will be repeated, fainter and fainter at every repetition, till they totally cease. Now, if every idea in the mind, (and I use the word to denote any simple state of mind accompanied with consciousness) is produced by the vibration of a nerve, and without such vibration, there is no idea; and, as far as we can tell, our nerves are subject to the same mechanical laws as other chords: it is at least probable, that supposing the mind, or what is the same thing, the organ of perception, to be once struck, and no more, it would continue to repeat the same idea again and again—but more and more weakly, till it finally ceased. If this be true, it is evident that one natural order of association, will be the repetition of the same impression, with a proportionate diminution of its strength at each successive return. And such decreasing impressions will easily run into each other, with an instinctive tendency to coalesce. This principle, however, is evidently of no practical use; since it applies solely to simple ideas, and can seldom operate abstractedly, amidst the perpetual influence of other coun-

teracting tendencies. Theoretically, if once ascertained, it would account for some primary pleasures which result from the regular repetition of elementary perceptions—as in sounds, colours, and lines. Every one who has observed his own feelings when dropping off to sleep, must have recognized a peculiar satisfaction in the gradual and perceptible diminution of the sensation left last upon the mind. In that half torpid state, a word, or a sound, lingers on for minutes; gradually sinking and dying away into perfect unconsciousness. The mere words, falling—dropping—sinking into sleep—demonstrate that such is the fact; for in all cases of descent, there is a gradual physical diminution in the energy of the visual organ, which has evidently led to the analogical expression. Even when we are perfectly awake, but suddenly struck by some overwhelming feeling out of all external associations, this tendency to repeat the same simple idea, is very frequently observable. Shakspeare, the greatest metaphysician that ever lived, next to the authors of the Scriptures, has frequently seized upon this phenomena, with his usual acuteness; and in giving to his scenes of violent passion that unconscious repetition of brief exclamations, he has shewn a discriminating power, very far superior

to that of the Greek dramatists. They vary the sounds, and combine them : Shakspeare strikes but one note—and that one, as simple as possible. Overwhelming grief never expresses itself in an irregular series of mixed words, such as occur in the Greek tragedies ; but Shakspeare's simple recurrence of—Oh ! oh ! oh ! oh ! oh ! is the very copy of nature. Now, as every thing which falls in with our natural train of association is highly agreeable, perhaps we might hence account for the delight which we experience, when sounds die away in the distance ; when they sink from a swelling series into a gentle cadence ; when lines are carried on in particular curves, and colours melt into one another by imperceptible gradations. And it might be a curious subject of enquiry in all these cases, perhaps also in the sense of touch, to ascertain the precise proportion of diminution in each successive impression, and whether it is exactly the same : as confirming the theory of vibrations, and shewing how completely incapable we are of perception at present, except through the intervention of the body, the question might assume an importance, which it certainly does not possess in any practical point of view, as connected with the operations of memory.

II. It follows, that the more nearly the second

idea approaches to the first, the greater similarity there is between them, the more easy the association will be : and hence, sounds which always greatly resemble one another, and which are inflected by the most delicate changes in the organs, constitute one of our principal vehicles of memory. Let any one hear a simple tune twice repeated, and run twice over the same number of visible objects in the same time, I think he will find that the music is much more permanently fixed in his mind than the points of sight : he will be able to hum the one, not to enumerate the others. It is true, that the sight does materially assist the memory ; but solely because we are enabled to dwell longer on ideas thus connected to the eye, than on those which are communicated through the ear. The importance of this principle is great, in illustrating the choice which Nature has made of the voice for the representative of all the senses. Language is evidently only one of many means by which we act upon the minds of others. But sounds are the elements, which from their simplicity, flexibility, and insignificance, are adapted better than any others to be the signs of all those ideas which it is necessary to retain and resuscitate : and the provision of our voice is one of the wisest contrivances which

Nature has exhibited in our system. It might, perhaps, also seem, that the organic vibration produced by sounds on the ear, are stronger, more impressive, and consequently more likely to recur in connexion, than those of any other sense. And if we look into our own minds, I think we shall also discover, that it would be impossible for us to discriminate, or recognize, or compare any simple perceptions, or to repeat any series of ideas, but such as are received through the eye, except by the medium of words.

III. But there is a third law of association, which nearly supersedes the other two,—which has frequently been dwelt on before, but which deserves a more full illustration, as the main engine of our reasoning—the grand spring of our moral improvement—and a key to almost all the phenomena of the human understanding. It may be re-stated, as it has been laid down before,—that whenever the mind, or the organ of perception, has passed frequently from one state to another, as from A to B, whenever A occurs, B will follow ;—that the tendency to this connexion will strengthen with every recurrence, and weaken with every interruption ; and that where no interruption occurs, it will become at last too strong to be broken by

any effort. It is this law which constitutes the force of habit. Every one may make trial of it in his own mind ; and there seems to be a principle precisely analogous to it, in the elastic and accommodating principles of certain animal and vegetable substances.

If this law exist, it is evident that every circumstance which leads to the repetition of consecutive ideas, will blend them together ; and these circumstances are principally the following, namely—pain, pleasure, novelty, and difficulty. The mere accidental recurrence of ideas, from the nature of our external situation, though most powerful and important in its influence, requires no illustration ; it is an exemplification of the law, which meets us at every turn. The other causes are more remote.

The position that the painful nature of sensations or ideas, produces their repetition in the mind, will evidently require to be modified and explained. Benvenuto Cellini relates an amusing anecdote respecting the means which his grandfather took to make him remember that he had seen a salamander ; this mode, was a violent blow. And it is quite certain, that very many of the facts most permanently impressed on our thoughts, are such as were attended with acute pain ; but it is also cer-

tain, that the painful nature of an idea has an irresistible tendency to banish it from our minds. It does this, by producing a change in the bodily organs; and those bodily organs immediately introduce a new train of perceptions. Any person who observes the effect of painful thoughts, will find that the body is perpetually in motion: the limbs are slightly convulsed; the eyes wander; and Nature makes every effort to eject the disagreeable intruder. Hence it is, that we become so miserable when this same painful thought is attached to every object around us. If we are in a room, we rush to the window; if we are in the open air, we retreat from the spot; we remove every thing which can recall us to our discomfort; and thus, in a very short time, we entirely erase it from our memory. The moral effect of this natural flight from pain is evident every day, in the tranquillity and deadness to our own situation, which besets us in a state of confirmed vice. How then shall we reconcile the incongruity? There is a difference, we must remember, between the tendency of pain to amalgamate co-existing circumstances, and its tendency to encourage their recurrence. Violent pain naturally concentrates and arrests the attention to the few points which are brought before the senses during its continuance; rigidity, and stiffness in

the muscles, seem to be its natural consequence. All power of motion is lost; and it necessarily follows, that the mind, confined to one particular direction, should dwell upon, and collect, and re-trace again and again, the few ideas which lie before it. A natural enumeration of the circumstances which accompanied the perception of violent pain, will therefore be brief and defective; one point alone will probably be selected, and all the rest omitted. In accounting for the effect of pain in reiterating an idea, we must also make a distinction between positive pain and remembered pain; and between such pains as are purely evil, and such as contain in them any mixture of pleasure. An idea which is positively disagreeable, though very probably, from the unsuccessful effort to avoid it at first, by diverting the attention to other objects, it may actually be linked to many, and be thus perpetually brought before the mind, will still at the last be expelled by the continual struggles of our instinctive aversion; but a fact, extremely painful at the time, will frequently lose all its repulsive qualities in the memory. Past sorrows, and evils, and difficulties, we delight to look back upon.—There is a dignity in suffering, which is left when the suffering is past; there is the increased satis-

faction at our present condition; there are the many sympathies and excellences which situations of perplexity develope. All these invest the remembrance of such things with an agreeable sensation,—we recur to them frequently, and with pleasure; and they become perfectly rivetted in our minds. But it can have escaped no one, who has attended in the least to the workings of his feelings, that many acute pains are deeply interwoven with pleasures; that we delight in experiencing them; that we are reluctant to abandon them. The luxury of woe, is a common and very philosophical expression; and that mind must be very unnaturally constituted, which has not at times experienced this singular anomaly. This is no place to analyze all the elementary feelings which enter into these curious compounds. The delight of sympathy is a prominent principle. The self-consequence which flows from being the subject of regard and pity to those who surround us; the consciousness of the rectitude of our feelings; the anticipation of consequences; the remembrance of past pleasures; even indolence itself falls in with our indulgence of sorrow. Our tragedies and novels, and a great portion of the poetry of the present day, are addressed to this morbid inclina-

tion ; and the charm of the feeling is so fascinating, the sensibility approaches so nearly to a virtue, that we materially injure our minds by giving way to it frequently and unscrupulously. We expend and waste our feelings upon high wrought and imaginary distresses,—after which, all the real miseries and discomfort of life appear cold and endurable ; and the consequence is, that we overlook ten thousand opportunities of indulging our pity on a small scale, that we may wait for some greater calamity. We send away the beggar from our door, that we may weep over a national famine. And this is not the only mischief: we learn, at length, to look forward to tragical catastrophes with a certain degree of zest, as subjects for curiosity, as mere spectacles to excite our passion. We are not only guilty of great waste, in failing to economize every single opportunity of active benevolence, with which the system of Nature provides us ; but we begin actually to delight in evil : and we too often palliate the crime by reference to our acute sensibilities, and compound for the selfishness of our actions, by the ardent benevolence of our hearts. It was such a philosopher as this, if the term be not grossly prostituted in its application to such a melancholy compound of vanity,

timidity, and vice, who embraced the whole world in the expansion of his affections, and sent his own children to the hospital. And it is a similar spirit of mere theatrical benevolence, full of show, and trickery and selfishness, which is rapidly stealing upon us in the present day; and which, a wise man will struggle to crush, lest it substitute poetry for reality, and swallow up all our noblest instincts under the guise of philosophical charity.

The expectation and endurance of suffering, and the consciousness of personal degradation, are, perhaps, the only painful states of mind in which there is no mixture of pleasure. These we endeavour to escape from, by every means in our power. And if Christianity be a fiction, there is no part of the scheme more artfully and ingeniously contrived, than the mode in which this difficulty is evaded. Every one will acknowledge, that the object of this system, whether the work of policy or enthusiasm, is to withdraw men from vice. But how withdraw them? By the association of pain, with its recurrence. Rewards and punishments were one obvious resource. All legislators have employed it—all religions contain it,—all, but Christianity. I do not mean to say, that happiness and misery, both here and hereafter, are not con-

nected, necessarily connected, with its precepts; but I do mean to say, that except when human nature was weak, and sinking under the weight of calamities, they never were set forth as motives.—

It is no part of the pure doctrine of the bible that we should abstain from sin, in order to gain heaven or avoid hell. Such is the consequence of our conduct, but it is not to be the motive; and we vitally injure our cause when any such representations escape us. It was a bold measure in the authors of Christianity to quit the great engine of persuasion, which human nature is so prone to employ; but the policy was as great as the boldness. Why did they not urge us,—us, I mean, to whom the bible is offered in the midst of tranquillity and philosophy,—why did they not urge us to virtue by threats and promises? Because the human heart is proof against them all; because it is impossible to associate such pains and such pleasures so closely with the thoughts to be repelled, as not to admit them an entrance; because with the interval of an hour between the commission and the punishment of crime, innumerable sophisms find their way to destroy the connexion between them: because obstinacy seems fortitude, and madness, courage, the instant that a threat is

held out ; and because once admit such a motive as the immediate pursuit of future good, and in an instant all the selfishness of our hearts is roused into action and mischief. To console the wretched, to support the weak, to balance the tortures of the present by the prospects of the future, and to wake into a moment of vitality the dead and torpid conscience, those who framed Christianity did reason upon judgement to come : but to minds which were strong in security, never, for a moment : they knew our hearts too well to tamper with them rashly. Their acuteness is singular at any time ; in such an age it approaches to a miracle.

But let that pass :—the problem was still to solve. Where could they find a pain which would deter men from vice, when punishments and rewards were rejected ? One would immediately occur :—that natural degradation and shame which Nature has infused into guilt. This would be liable to no such results as the selfishness of fear or hope : it would act by instinct ; and act universally. But the difficulty lay not here. This shame and agony of remorse, is to man the most bitter of all pains ; and by the laws of his nature he cannot endure it. It expels itself : it did so under every system of religion before Christianity ;

and philosophy never ventured to use as a spring to amendment, what could not be retained in its place. Christianity, however, was not thus baffled. It did employ this spring: it preached repentance: it exhorted men to cherish and dwell upon thoughts the most agonizing to our minds; to feel pleasure (for without feeling pleasure, the effort was physically impossible) in the most acute and unmixed pain. It did this, because we never could instinctively avoid sin, without instinctively feeling pain at the thought, nor instinctively feel pain at the thought, unless such pain had been firmly and indissolubly attached to it by long and repeated association. But how has it provided for the pleasure which must be connected with the pain, to make it, for a moment, endurable? By the promise of pardon on repentance; by the gleam of hope which passes even through the night and tempest of a troubled conscience; by the thrill of gratitude and sympathy when we think on that great Being who died for our transgressions, and by that grand and awful terror which falls upon the soul, when we lie smitten into the dust before the majesty of an offended God; measuring (as we only can measure) His infinite excellence by our infinite depravity: and yet feel-

ing, even in the agony of our debasement, that there is no impassable gulph between us and our Father, that His eye is still upon us, and that His love is not yet exhausted. We may run to poetry and fiction to indulge a high-wrought excitement. But there is a luxury, even in remorse, which is like no other sensation. There must be, or remorse would be a stranger to our hearts; we should drive it from us in a moment; we should never repent; we could never forsake our sins. And, I say, that in all this contrivance, there is a deep-sighted knowledge of human nature, which is not to be found in any other book, or in any other system of philosophy or religion: there is provision, and art and design, which have no parallel in Paganism. In Paganism, remorse was never encouraged, for it could not exist without the substitution of a totally novel mythology. To have applied it as a principle of reform, they must have invented a scheme, the precise parallel of Revelation. The one part fits necessarily to the other:—detach them, and both are made useless. If this be art and fiction, it is a fiction which excludes all enthusiasm from the cool deliberation which framed it. If it be mere metaphysical knowledge, the persons, who in such an age, pos-

essed such knowledge, were something more than mere uneducated fishermen.

Little need be remarked on the influence of pleasure in impressing ideas on our minds, in rivetting associations, and causing their recurrence. The whole mystery of attention, which includes the whole mystery of intellectual superiority, lies in this. An intense feeling of delight, like an intensity of pain, rivets the observation to the objects before it: and, in general, whatever trains of thought are agreeable, into these we shall naturally slide. By their constant repetition our habits and opinions will be formed; we shall gradually limit our contemplation of things to those points of view which gratify our tastes; we shall, unless great caution be employed, become narrow-minded and bigotted; we shall see men and things in only one relation; and prejudices and errors, both moral and intellectual, will thicken on us as we limit our views. There is only one class of thoughts and sensations which we can venture regularly and frequently to indulge, without the danger of such a result: all others we should vary as we can; and overcome the natural tendency of the mind to run on in the tracks which it has already formed; not only lest the pleasure we origin-

ally felt, should be wasted and exhausted, but lest the thought get the better of our reason, and we become, as is the case every day, partial in our judgment, arrogant in opinion, neglectful of our general duties, inordinately attached to particular objects, bent violently upon ends without any regard to the proportion of means, hasty in action, speculative and fanciful in theory, and in all things the very reverse of that bold, expanded, and comprehensive frame of mind, which takes in, at one view, all the features, bearings, and deductions of every subject within its grasp ; and saves us from as much folly in reasoning, as danger in practice, and viciousness in morals. Whenever a train of thought, or even a single idea, steals too frequently upon our reflections, the greater delight that it occasions, unless it be perfectly pure, the more strenuously we should repel its approach : and even when thoroughly good, we should often do well by breaking up and altering our associations. But our thoughts, as every one knows, are like horses badly trained : if we do not rigidly confine them, they will carry us off in an instant ; our meditations by day will be like our dreams by night,—a mere unconnected succession of irregular ideas. Nothing is so delightful to an indolent, indeed to

pulse was obeyed. The phenomenon is extremely interesting as the subject of metaphysical inquiry. But it is infinitely important in practice both to ourselves, and to those who are called on to discriminate on such occasions, between a depraved principle and absolute insanity. The singularity consists in two points, first, in the agreeable sensation produced by such thoughts; and, secondly, in their mechanical stimulus to action. No one, however, can have looked into the human heart in its natural state, as exhibited in savage life, and in the ages of Paganism, without observing a wonderful tendency to cruelty, ferocity, and particularly the shedding of blood, and the destruction of life. There is an energy, an excitement, a power, about all such actions, which possesses a sort of fascination. The curiosity is strongly stimulated: even the sympathy awakened by it has been frequently acknowledged as a motive. The very facility of destruction is a powerful temptation, which is exhibited every day in the mischievous propensities of children; and these circumstances combined together, in minds which have never from thought associated with the notion of murder, the pangs of conscience, the prospect of punishment, or the abhorrence of crime in general, act as a

charm which they cannot dispel ; a charm which would work upon us with equal force if we ventured to contemplate the subject. But upon thought action necessarily follows. If some previous conjectures on the origin of motion be true, it is evident that they are mechanically connected ; at any rate a series of anticipations inevitably produces the want of their fulfilment. It is a primary law of our mind : ten thousand whims and caprices arise from it every day. We act because we have taken it into our heads, without reason, or object, or interest. Let a man entertain the idea of stretching out his hand to touch the book which lies before him, and he certainly will do it. The experiment may be made in an instant, and the principle on which the pain is caused, will be more generally illustrated presently. There is not only a singular degree of purity and elevation, but very profound metaphysical knowledge, in the precept of regulating our thoughts rather than our actions. It was no common superficial observation of human nature which led to its enactment ; for the general impression is against it. We fancy that we can think without acting, but the thing is impossible ; and hence the extreme danger of admitting into our minds a single idea, however re-

volting at first, lest it gradually root itself in our associations, connect itself with one train of thought, and one only, detach itself from all that are painful, lose all its offensiveness by degrees, and then, like the prophecy of Macbeth, work out its own completion.

There is only one observation which I would subjoin here, and it approaches so nearly to mere fanciful speculations upon forbidden subjects, that I am reluctant to make it. But any thing which throws light on the antecedent probability of Scripture history, is worth suggesting. Is not this the principle to which we must trace the fall of our first parents. If they were created in perfect purity, without any moral taint, we must look for the cause of their deflexion from right, in some inherent weakness in their organization, physical rather than moral. Now here is precisely such a defect. The mere prohibition of an action, if Adam was formed as we are, would necessarily introduce the idea, and excite the want, just as it does in us. It is a common phenomenon. But it should be assigned, not to the corrupted state of our nature, but to its original and universal constitution.

If any external influence was superinduced to

cause the repetition of the idea, the want would become stronger; it would necessarily triumph, and triumph more easily because no pain existed to counteract it: for, pain at the commission of wrong is never felt till wrong has been committed. It was not till the apple had been eaten that the knowledge of good and evil fell upon the guilty pair. So long as the want existed, the associations were carried on but in one channel. When the want was satisfied, other views and relations began to appear, and remorse and conscience instantly waked up. There is, in fact, no subject more worthy of deep metaphysical enquiry, than the first few chapters of the book of Genesis. It would be a very interesting thing to give a philosophic mind, thoroughly acquainted with human nature, and perfectly ignorant of the Bible, the fiction of two human beings, formed upon the general model of our nature, and placed in the situation in which our first parents are described. Let all the laws of our mind be accurately ascertained, and the probable, or even necessary consequences which would flow from such a situation, be traced out with the same kind of calculation as we should employ upon the movements of a falling body, which is to strike, in its descent, upon

certain given planes. It would be curious to examine whether the results thus obtained by metaphysics, would not be precisely the same as those given in Revelation. Whether all the various branches of human depravity would not shoot necessarily out from one single deviation from innocence. Whether murder, and polygamy, and idolatry, would not be three of the earliest crimes committed in the world. Whether a rapid developement in the arts, an extraordinary prolongation of human life, an overwhelming profligacy of manners, and the necessity of utterly destroying the whole of an infected race, to effect a renovation of their nature, would not be as much the conclusion of a mere speculative philosophy, as they are the facts of the Bible. Once allow that the laws of mind are like the laws of matter, fixed and unvarying, (and we act every day on the conviction) and an immense field of interesting and important enquiry opens instantly before us. The internal probability of the Old Testament history would be instantly established ; and those who impugned it, would be left to one of these conclusions, either that the facts were true ; or that they were hit upon by chance ; or that the fiction was the result of metaphysical knowledge, infinitely superior to any

which has ever existed in human reason. It is too common to ridicule hypotheses thrown out without an effort at proof. But no one can contemplate the new world of moral and intellectual science which is just now expanding to our view, without anxiety to connect our researches in its wildernesses, with something like practical utility. We are too apt to look with contempt on metaphysical studies, as if they were a mystery and abstraction incomprehensible to common minds, and fruitful in nothing but words. The term is indeed unfortunate, for it was stamped upon the science by a suspected hand, and in an unpropitious period—and it bears on it no obvious meaning. But if the laws of matter are worthy of engrossing so much of our attention, surely the principles of our minds are equally deserving of study. The fact is, that we are all metaphysicians to a certain extent. We never meet in the intercourse of life, but with some metaphysical principle as the basis and guide of our conduct. All that we have to do is to simplify the elements of our knowledge, that we may combine them more generally and successfully. It is a science peculiarly attractive, for it follows us into every situation, and requires no accidental coincidence of circumstances, and no apparatus for ex-

periments but our own mind. It brings within its range the whole circle of sciences and arts. It is full of unexplored ground, rich in the most important discoveries, and as paramount in grandeur and sublimity to any other sphere of knowledge, as the soul is superior to the body. Unfortunately, Aristotle, with all his profundity of intellect, was frequently a jargonist. Kant was a visionary, and Hume a sceptic. We have been cowards enough to feel alarm at this accidental conjuncture. There are, we have reason to believe, a great number even of thinking men who dread the cultivation of metaphysical knowledge, lest it endanger the stability of our moral, political, or religious systems. The notion is absurd: the fear contemptible. That man has very little faith in the stability of his belief, or the truth of his opinions, who would not willingly plunge into any perplexities of science, in the full and unshrinking confidence that he will find them, though concealed, at the bottom. It is not the extension of metaphysical knowledge which is pregnant with danger,—(for this is our only safeguard)—but the narrow limits within which that knowledge is diffused,—and the errors with which it is corrupted. A wide and open atmosphere, a free and extensive circulation, is necessary to purify

opinions, and neutralize any latent mischief. And so long as we suffer a science to be engrossed by a few minds, and those minds in general curious and speculative, and bold, with perhaps more thought than feeling, and greater anxiety to discover what is new, than to illustrate what is old, so long we shall leave it a prey to paradox, scepticism and error : we shall surrender a vital post, rather than ward off a false attack. And when the talents entrusted to our care shall be demanded at our hands with interest, will it be an answer to make, that one, the richest of all, we had feared to employ ; that we had distrusted our commission, that we had wrapped it in a napkin, and abandoned it wilfully to the enemy, to be abused and perverted to his ends ?

In addition to pleasure and pain, there are two other principles which tend to amalgamate ideas by causing their frequent repetition,—novelty and difficulty. The nature of surprise, and its tendency to throw back the mind upon the new association presented, has been already remarked. There is a difficulty in sliding through the perceptions, which causes delay and hesitation : and it is this which impresses them on the mind : and whenever any obstacle occurs to a train of thought, the same de-

lay is naturally the consequence. We pause on the brink of a precipice,—or the foot of a rock; and the eye, by resting on the objects, collects and retains all their principal features. Hence those pieces of music and chains of words, which at first are most difficult to retrace, are, by an effort and repetition, most permanently fixed in the memory. The quotations which we hear most commonly made, have, in general, some singularity or difficulty in their rhythm or thought. In the *Memoria Technica*, no words are so long remembered as uncouth and harsh combinations. No features in a work are so frequently recollected as those which have shocked and offended us. It is needless, however, to illustrate a fact which is familiar to all; and I would only add to this sketch of the principles of memory, the following observations :—

1st. That objects of sight, as dwelling longer on the organs of sense than any other perceptions, are the best media for retaining ideas.

2nd. That ideas which naturally suggest each other by the relation which they mutually bear, are most easily cemented together,—such are cause and effect, contraries and similitudes, analogies, and the like.

3rd. That whenever a series is to be retained,

with a difficulty in connecting and arranging the parts, it is advisable to employ some other existing series on which to append the second. The alphabet, the numerical figures, the permanent objects in a room, are all well calculated for this purpose. Each idea is separately to be dovetailed into its peculiar link, and thus they will all hold together.

Such seem to be the principal instruments of memory. And whenever we find an extraordinary instance of this faculty, it might probably be traced universally into some habitual system, conducted on these or similar laws; though, perhaps, from want of internal observation, unknown to the person who employs it. Like reasoning, it is nothing but association, assisted by attention and repetition. This association becomes at last perfectly mechanical, conducted without effort, and in many cases without even consciousness. And, perhaps, by a careful examination, principles common to us all might be found sufficient to explain even the most wonderful phenomena which fall under the faculty of memory. The prodigies of arithmetical skill which are sometimes exhibited, might be resolved into a very strong affection of the visual organ; or mere concentration of thought, with quickness and regularity in the succession of ideas.

The movements of the rope-dancer are equally numerous, equally complicated, and equally rapid with the calculation of numbers : and the elementary ideas are scarcely more varied in the one than in the other. At any rate, memory sufficient for the purposes of life, and any intellectual cultivation, lies within the reach of all. Like all other excellencies, the way to it lies between a Scylla and Charybdis ; between entire neglect and superfluous encumbrance. It is a weak mind that remembers every thing,—and still weaker one which strives to do so. In the one case, nothing is prominent, in the other nothing selected. If superior talents are found united with a memory universally retentive, (and the phenomenon is rare,) we may be assured that some secret analogy, some thread of connexion, very fine and very curious, runs through the whole mass of materials, however discordant in appearance. But for common minds, it is wiser to sift and extract from the accumulated stores of human knowledge, such portions only as can be digested and assimilated with our peculiar subject of enquiry. If we attempt to carry on many unconnected trains of thought, we shall risk the loss of all. Time will fail us in learning, much more in discovering truth ; and discovery is the great object

to which our labour should be directed. And when we are tempted to overload the mind with a multitude of facts, we should remember that the labour is as rational as that of a man who, with the prospect of building a house at some time or another, should carry with him, wherever he went, the stones and the timber to form it. If he was wandering in the deserts of Africa, where materials were not to be procured, the plan might be excusable; but in a country where quarries and forests occurred at every step, the absurdity would be palpable. We can seldom be thrown at present entirely out of reach of materials for investigating truth. Books and references are always at hand; and our instruments should never be abandoned. But more than this we have no business to undertake. We shall indeed sacrifice the paltry pleasure of displaying the treasures of our knowledge: we shall frequently be compelled to sit silent, when others are fluent and instructive; and those who are ignorant themselves, will charge us with ignorance likewise. But our reward will be great in the economy of time and labour, which such sacrifices ensure; in the consciousness of their ultimate utility: in the feeling that we are discharging a duty, and in the rapid and certain progress which

we ensure in one course of study, by refusing to digress into many.

There remains but one subject of enquiry in relation to our intellectual processes, but one the most important of all. What motive shall we employ to quicken the attention and rouse the curiosity of the student? If attention and curiosity properly directed be sufficient to work all the miracles of the human understanding, how shall we put in motion these powerful and universal springs?

Now as pain, either positive pain or the want of pleasure, is the only motive for rational action, to pain we must have recourse.—What is this pain? And how is it to be generated?—Evidently in three ways: by coupling with ignorance either the apprehension of evil, or the desire of pleasure, or simply an uneasy state of mind, without reference to any ulterior object. Since, however, the two former pains can only accidentally be connected with ignorance; however desirable it may be to apply them, when a very strong stimulus is required; the best thing will be, if possible, to make ignorance itself painful, and to render the mind active in the pursuit of knowledge, for the sake of knowledge itself, or to speak more precisely, from the pain which it feels in the want of knowledge.

A boy who learns his task to avoid a whipping or obtain a reward, will relapse into indolence when these inducements are deficient. But make him uneasy from the sole circumstance of ignorance, and the habit of industry will adhere to him, whenever that ignorance is felt. In perfect ignorance, then, there is no pain whatever. Otherwise, as consciousness is blended with every idea, and perfect ignorance is the absence of all ideas, an unconscious state of mind would be the most painful state of all—which is an absurdity. The uneasiness of ignorance is always coupled with a vague and indistinct idea : and a vague idea is produced when the mind half passes into a particular state, and is checked before its perfect assumption. Why this half and abortive effort is attended with uneasiness, in the present imperfection of our metaphysical knowledge, we cannot explain : but that it is so, is evident in an infinite variety of cases—and the uneasiness itself is one of the primary elements of our painful sensations, just as its opposite pleasure, that pleasure, I mean, which the mind feels, when it passes fully, and distinctly, and perfectly, into an anticipated state, enters most largely into the composition of our happiness.

There appear to be three cases principally in which this indistinctness is produced.

1st. When an external object acts upon the mind in such a manner as to produce a very faint and feeble perception, as in the case of sounds, colours, and other sensations of the touch, the taste, and the smell.

2nd. When the mind, in passing into a particular state, meets with any check, either from an internal or an external cause.

3d. When it is left suspended upon the verge of an idea or sensation, from the want of something to satisfy it fully.

To the first case may be assigned those irritable and impatient feelings which are excited by slight bodily pains : or even by bodily pleasures when scarcely perceptible. A faint smell, a low, indistinct sound, a thin film before the eye, a flavour which we cannot ascertain ; that miserable chilliness which sometimes creeps over us in sleep, and which is worse even than positive cold, seem all to be reducible under this general head.—The second may be illustrated by the uneasiness of disappointment in general.—By our disgust at unrhythmical sounds, false quantities, notes out of tune, sudden interruptions to our thoughts, false steps, discordant

voices, actions inconsistent with circumstances, and general impertinences of conduct, any want of sympathy with our feelings, sudden turns and angles in lines, harsh colouring, and shocks to the palate ; in short, at any interruption to the states which we anticipate. And that this interruption is the essential cause of the pain, is evident from observing, that many of these states are perfectly indifferent, and even agreeable when preparation has been made to receive them. No one is angry with a person who shakes him by the hand : but let the hand be seized in the dark, and resentment would certainly be roused. No one feels pain at discordant notes in music when they are seen to be intentional : but let a different sound be expected, and a sensitive ear is distracted. Nothing is more a matter of indifference than descending a staircase, but let us tumble down a step without seeing it, and we instantly feel indignation.—The pain which arises from any interruption to our habits ; whether the check be caused by something external, or by any pain associated with them, is reducible under the same principle. And this, where the nature of the indulgence has not been exciting and stimulating : in that case there is left upon the nerves an additional want and craving, which is the

great obstacle in the way of reformation.—It is not improbable that both feelings are the result of the same physical action on the organs of sensation ; but at present this is not ascertained.

Under the last case of uneasiness may be brought all those instances of interrupted thought, in which the indistinctness of the idea is caused rather by a blank and deficiency, than a positive counteraction. Such is the inability to recall a word, or a tune, or a countenance. The ineffectual tendency to sneeze ; the vagueness of perception where the outlines of an object are dim and fluctuating ; periods too abruptly closing ; the absence of familiar objects ; the loss of friends ; fear and anxiety, which are always more painful than any reality ; any want whatever, without the means of its satisfaction ; and ungratified expectation in general. And in all the three cases it should be remembered that the uneasiness is increased accidentally by physical pain, or apprehension of evil, and essentially by the proportionate faintness of the perception, the suddenness of the check, or the protraction of the suspense. A minute and perfect analysis of this principle, tracing it through all its forms and combinations, would lead to most important deductions. At present it can merely be pointed out.—The opposite pleasure, though with this we are not so much concerned, is

perceptible whenever we obtain clear, full and distinct ideas, or states of mind : whether insulated, or successive. Clear, sharp, and bold outlines, full and acute sounds, decided sensations of any kind, notes exactly corresponding with our expectations, rhythmical dancing, simplicity in architecture, equal intervals in space, natural conduct, habitual trains of thought and action, punctuality in engagements, full and implicit confidence in our own powers or those of others, perfect indifference to contingencies, certainty in belief, unhesitating assurance in the sympathy of friends ; all these appear to be connected by one common principle, and to be highly delightful to our nature, from the distinctness, satisfaction, and perfection into which they shape our impressions. To obtain this delight in its fullest extent, we have before seen that some previous suspense must be caused. Its exact proportion cannot be accurately determined. Where it is wanting, though great pain is felt at interruption, satisfaction gives little pleasure. Where it is carried too far, we become restless and uneasy, and even the completion of the idea fails to produce its genuine effect, just as protracted fasting is apt to destroy the appetite. In these two principles of pleasure and pain, the whole energy of habit seems

to consist ; and many very important truths in morals might flow from their examination. Two are evident : first that the uninterrupted exercise of moral virtues commonly so called, cannot constitute our legitimate happiness ; since, when they once are formed into fixed and unbroken habits, they cease by necessity to give pleasure. To deviate from them is infinitely painful ; but to continue in them gives no delight. Happily the pleasures of temperance, justice, charity and fortitude, meet us at our first entrance into virtue, and quit us only when no longer wanted. And precisely the same remark must be made of the pleasures of imagination ; since all their sharpness and vigour arise from their novelty ; and beauty and grandeur soon pall upon the expectant and habituated mind.

And secondly we may observe, what has often been observed before, in contradiction to a popular prejudice, that virtue does not consist in self-denial. Self-denial is very essential to form our habits, but so long as it is necessary we are not thoroughly virtuous. The object of all moral education is not to make us do this, or abstain from that ; but to make us feel pleasure at good, and pain at evil ; and consequently the absence of all hesitation and difficulty in the discharge of our duty, is the high-

est proof possible of our advancement in moral perfection.—The error has evidently arisen from the same false analogy in the application of censure and praise which has involved our notions of justice in such lamentable confusion. We look at actions and causes, not at inclinations.—Because in blaming or applauding we trace conduct up to the will, and by the will regulate our opinions, we think it right to trace the will up to some causes beyond it, and judge it with reference to them. But our pleasures and pains are the point at which all moral reasonings must stop. When we go farther we are lost. We may climb up to the roof of a house by the steps of a ladder; but when we imitate the monkey, and set a ladder on the roof to climb up into the air, we shall certainly rue the experiment.

Such then, is the character of that essential pain which must be employed as the spring of intellectual action. Whenever we can succeed in producing it to a sufficient degree of acuteness, we shall cause an instinctive effort to obtain relief, by procuring a full, perfect, and satisfactory state of mind, instead of one vague, fluctuating, and indistinct. Nor does it make any difference what the operation is which we wish to be performed: whether it be to investigate a cause or ascertain an effect, or prove an hypo-

thesis, or analyze a definition, or observe accidental conjunctures.—Curiosity and attention, with this stimulus to prompt them, will carry us through all.

The next question to consider, is this : How far, and by what means, this stimulus may be excited ? And here it is evident, first that the object itself must be adapted to produce, and secondly the mind be susceptible of feeling, it.

Now, over the objects of intellectual perception we can have no direct influence, except during the process of education. So long as we are the media through which ideas are presented to the mind of the student, or at least are at hand when they occur, so long and no longer can we handle, and modify, and arrange them in such a light as to rouse the uneasiness of curiosity. Then indeed, this may be done in three ways, corresponding respectively with the three cases above mentioned.

First, by presenting the idea to the mind as vague and indistinct, and this may always be effected by a system of interrogation, by demanding a clear and precise explanation of every word and idea. Since, whenever the mind is thus conscious from experience of its inability to give such an explanation, it becomes fully convinced of the vagueness of its notions: when otherwise, it is willing to acquiesce

in the distinctness of the sound and the word, instead of distinctness in their meaning.

Secondly, by presenting ideas, if new, as new, and if old, in new combinations. Since, from that law of mind which makes it difficult to connect two dissimilar states, without frequent repetition and effort, novelty checks naturally the transition from one to the other, and thus answers the purpose of producing the requisite uneasiness. The ingenuity, if the application of such a word be allowable, with which this principle has been employed in the moral precepts of Christianity has already been observed by others. The position of the mind between two general but contrary rules, a position into which we are frequently thrown when studying the Bible, is of all others the most calculated to rouse the attention, and excite enquiry. There is a novelty, a paradox, a difficulty about it, from which we long to be released, and yet cannot be extricated without a careful and minute investigation. If all the truths of revelation exactly coincided with our expectation, if it did not contain mysteries and perplexities to make the reason uneasy, we might indeed be more ready to receive it, (though even this perhaps is not certain) but we should receive it to little advantage. There would

be no practical application, no scrutiny into its spirit, no calculation of contingencies. The great mass of its evidences would, in all probability, be at this moment buried and unknown. They have been dragged out to light by the difficulties of Christianity; and the labour has been as useful to those who undertook it, as necessary to the stability of belief. We should have read the history of the Bible as a novel; its precepts as a system of philosophy; its denunciations and promises as beautiful poetry: but the whole would have slipped through our minds, and retained no hold upon our hearts. Truths must be barbed and hooked to cling to us in their passage through the mind. To make them smooth and easy is only to facilitate their escape. In our course of education, both moral and intellectual, we might perhaps, if caution were used, have recourse to a similar system. At any rate we should guard against the indiscriminating latitude of general rules. We should note exceptions, point out anomalies, frame striking and analogical conjectures, vary the position and relations of ideas, calculate the results of hypothetical combinations, and carefully distinguish the most minute differences amidst similar features.

The third mode of exciting curiosity is to encourage

a tendency to transition, and at the same time a tendency to hesitate. This can be effected in two ways.—First, by constantly checking the mind in forming associations without thought, by a regular system of interruption.—When we wish to prove to a student the indistinctness of his notions, we should perpetually demand his meaning. What do you understand by fire, by air, by food, by bread, or by water?—It is the common objects and words which are likely to deceive us; and such are the words on which we ought to seize. And when we wish to break up his hasty and superficial associations, we should in the same manner accustom him to be asked: Why does fire burn? why is air transparent? why does food nourish? why is bread heavy? why is water buoyant?—This will gradually superinduce a general tendency to doubt and hesitation, where all the intermediate links by which ideas may safely be connected have not been minutely drawn out. And it will also produce a tendency to expect something concealed and ulterior beneath mere superficial combinations. Till further scrutiny has become impracticable, we shall be restless and impatient, and our discoveries will be proportioned to the acuteness of this pain.—The second mode of encouraging an expectation of

something to be known, is to take very large and comprehensive views of things; to shew the infinite radiations of ideas into their numberless relations and inferences; to accumulate the minutiae of description, and generally to increase the capacity of knowledge by augmenting knowledge itself. The tendency to expand increases with expansion. The anticipation of what is unknown is proportioned to the quantity of that which is known; and it is thus that a hasty incredulity is always united with a narrow mind, and an impatience of laborious enquiry; while those men who know most are most open to reasonable evidence, and most active in the investigation of Truth.

So far, then, during the progress of education, we possess a certain command over the ideas which are presented to the mind of the student, and can modify them so as to produce the requisite effect. But this power ceases when education is completed, and the student is left to himself: and though Nature sometimes acts the part of an instructor, and offers herself to observation in such forms, and under such circumstances, as immediately to awake curiosity, still this happens but rarely, and we must not calculate as certainties on such fortuitous phenomena. We must, therefore, leave his mind,

when it issues from our hands, so constituted as instinctively to supply to itself the place of an instructor : we must have formed it into the habit of mechanically pursuing all necessary intellectual operations ; of forming clear, distinct, and accurate notions, of arranging its ideas in new combinations, of perpetually demanding the reason and the cause, and of hesitating to consider an object as fully and perfectly developed, till all its minutest constituent parts, and most varied relations, have been analysed and resolved.

Give a man, then, such a natural constitution of mind, or, it may be, of the physical organs connected with the mind, as to be susceptible of uneasiness, when making an imperfect effort to pass into a particular state (and though this susceptibility and irritability appears to vary in different persons, still there is seldom, if ever, a total deficiency) and then superinduce upon this primary uneasiness the force of habit, that is, apply precisely the same principle to sharpen and increase it ; accustom the mind so constantly to associate with its ideas, particular processes, as to feel pain whenever they are omitted ; the pain at omission increasing with the tendency to repeat them, and the tendency to repeat them becoming stronger

with each association.—Give a man, I say, this principle of enquiry, and you give him, if not the key of knowledge, at least a vigour and a patience which will break down all the barriers to its entrance. This is the main-spring of the Intellect, which it is the highest work of intellectual education to quicken, to strengthen, and to manage. If indolence, or dissipation, or neglect, have in any mind relaxed or impaired it, or if any great effort is demanded, which requires an additional stimulus, we may press upon secondary springs to aid and assist its force. But it never should be forgotten that in no single exercise of that power which Nature has so miraculously entrusted to us one over the other, is such a heavy responsibility incurred, as in their careless and wanton employment. That man may well tremble who directs such an engine as the Intellect. Paltry and powerless as it is, when measured by capacities above us, within the narrow sphere of human agency it wields a vast and supreme dominion : once put in motion, it is soon beyond the reach of all external controul, and the incalculable magnitude of its effects, the secrecy and subtlety of its influence, its ready and unshrinking subserviency to all the bad passions of our nature, the infinite range of its

energy, unlimited either by time or space; even the misery entailed on its possessor, when its bias is warped and perverted,—all these are overwhelming considerations when we venture to regulate its motions. Unhappily, there is but one right end to which they can be pointed, and there are many wrong. And an indolent, ignorant, and vitiated system of instruction has seized upon all the wrong, and entirely omitted the right. Wisdom is indeed held out to the child the moment his mind is opening on the scene around him; but wisdom, not for the sake of itself or of mankind, but to gratify an interested selfishness. And, as if no impulse were too strong, and no compromise too great, we let loose all the passions of his heart to drive him on in the career of knowledge. We rouse his envy, his ambition, his avarice, and his vanity, to goad him onward to the pursuit: and where these are too weak, we apply the last base motive of the coward, and urge him by bodily pain, “*ὑπὸ ματίγων ἐλαύνομεν.*” But let us not deceive ourselves; such is not the temper which we are entrusted to frame,—such is not the cool, honest, manly, unwearying spirit which knowledge requires of her children. We may strain our nerves for a moment, but they will soon sink be-

neath the effort. We may grasp what appears to be truth, but where will be the firmness of principle to sift out the errors which debase it? What will keep us steadfast in our toil, when our end can be gained by sophistry, or disappointment has palsied our exertions? or, how shall we calmly scrutinize, and deliberate, and calculate, when our minds are fevered with impatience, or restless from some evil desire? He who would worthily enter into the temple of truth, and sacrifice to the Creator of all things on the high altar of his glorious works, must approach to the worship of knowledge as to an act of religion, with no low or unworthy feelings. He must have cleansed his mind from all envy, and pride, and petulance, and selfishness: he must lift up his thoughts to gaze upon the grandeur of the universe around him, till every mean desire, and every tumultuous passion has been stilled into a solemn tranquillity. When he looks with awe and terror at the gulph beneath his feet, and the interminable night above his head, and the myriads of unfathomable mazes stretching out on every side, with darkness and silence resting on them,—he will not dare to think that his petty powers are to measure the infinity of Nature; that his miserable blindness is to pierce

what she has involved in darkness ; that all the mysteries of things are surrendered to his arrogant presumption. He will fear to bring the vices and follies of the world into the presence of that Immortal Spirit in whose light he is walking. He will gird himself to the labours appointed, with reverence, as a hallowed duty ; with humility, as a work above his strength ; with deep and grateful cheerfulness, as looking forward to the benevolence of his end : but no murmurs at disappointment, no impatience to anticipate success, no caprice in abandoning a *fixed* and deliberate choice, no jealousy of discovery, no burnings after fame or distinction, and no zeal to animate his efforts with a false and pernicious enthusiasm, but the full and manly conviction that the pursuit of knowledge is but one in the circle of our duties, which neither requires praise nor deserves reward ; that the motive only is of value in our own hearts, or in the balance of Him whom we serve ; that the issue is placed in His hands, and that we may sink quietly to rest when the hour of dismissal arrives ; indifferent alike to the ignorance of the past, and the contingencies of the future, and knowing only that our labour of love will never be forgotten or unblest.

Such appears to be a general outline of the

business of the human understanding. We must collect ideas, we must arrange them, we must blend them together, and manage our arrangement so as to retain them always in our power : and to induce us to perform these operations, we must have minds so constituted by Nature, and so exercised by art, as to feel pain whenever we are unable to obtain precise notions of things, or to connect two ideas together by some common and satisfactory link. That a part only, and a very small part of this process depends upon Nature, and that after having given us sufficient springs and principles of motion, she leaves us to apply, direct, and improve them, is evident from the case itself. Of the duties which devolve upon education, some consist in the explanation of rules, in laying down the plan on which we are to act, and others in forming habits. And this second duty, as involving the first, is the grand and primary object of all early cultivation. It is, indeed, a very common error to conceive that the business of education is principally to provide the mind with ideas, to accumulate in it a number of facts, and to enlarge its knowledge, rather than to improve its faculties. That facts are as necessary in our intellectual operations as stones are in building a house, or wood in lighting a fire, is

perfectly evident: but very few considerations will be sufficient to shew that the collection of these materials for reasoning is a very secondary object. Place a man in a desert island, filled with fine quarries and excellent timber, and keep out of his reach axes and saws, and wedges, and he will be much in the same situation as a person who has accumulated facts without knowing how to employ them. Put the same man in a plain, without a stone or a tree near the spot, and give him the implements of masonry, with dexterity in their use, and he will soon contrive to construct a house, even from the mud on which he treads. And just so, a person whose faculties have been sharpened and exercised, will find the slightest fact, the most common phenomenon, things which the generality of men never perceive at all, or wonder to hear described as worthy of notice,—every one of these will he find full of important deductions. It is only an uncultivated mind which requires a load and accumulation of knowledge to assist his thoughts. A philosopher is encumbered, not benefited by it: and an induction once carefully drawn, is as perfect from a single instance, as it is from ten thousand. Neither are there many discoveries to be made in the remoter

and abstruser regions of enquiry. We have approached nearly to those limits beyond which our senses will not carry us ; and while we busy ourselves in distant speculations, we are too apt to neglect what lies before our feet. The grand field of investigation lies immediately before us : we are trampling every hour upon things which to the ignorant seem nothing but dirt, but to the curious are precious as gold. The mine of knowledge is about us and within us, if we could but see it. If our eyes were not blinded by habit, instead of waiting for a miracle to rouse our wonder, we should be in one fever of astonishment, from sunrise to sunset. If we could but transfer ourselves in fancy to another world, and put on a different constitution of mind and body, and then come and look down upon this earth, the phenomena which would strike us as singular, would be the common and every day appearances of life, which we call natural, and presume to be necessary. How we came here ? why we were created ? why brought into the world as infants, and not full grown ? why this perpetual change and motion which circulates around us ? why made liable to decay ? why to death ? why life could not be supported without inserting two or three times a day a quantity of

extraneous matter into the machines to which we are attached ? why we possess such influence over the happiness and misery of each other ? why any misery at all should exist ? or why we should be shut up in such a corner of the universe, enveloped in fogs and mists, drenched with rains, terrified with storms, convulsed with earthquakes, deluded into a belief that mere affections of our mind are parts of an external world, cut off from all immediate connexion with that vast and stupendous palace of which we are placed in the dungeon ; and blinded, like harnessed beasts, lest we should be terrified into madness at the condition in which we exist ?—these are the wonders which would perplex an inhabitant of another planet, when he sailed by and looked down upon our earth. And then our moral condition. To see the human heart with all its motions and thoughts, — such a medley of foulness and grandeur : to watch its incessant restlessness, with its longing for repose ; its years of toil for the charm of a moment ; the agonies which it risks, to escape from a single pang ; its thirst for the end of enjoyment, and neglect of the means ; all the struggles and complications of its passions.—And then the ridicule of its pride ; the affectation of unbounded su-

periority over the creatures of Nature ; the vanity of infinite knowledge ; the boldness and security with which we march on amidst the conflict and collision of innumerable chances, like a blind man in the shock of a battle ;—these are the miracles, the miracles of every hour and every minute, which ought to rouse us into wonder. These are the facts on which superior beings must gaze with awe and pain, as we should on some strange derangement in a glorious fabric. Are not the eyes of angels looking down on us, at this moment, with the same compassion and terror as we look on an asylum for madmen, on an hospital for diseases, on a condemned cell for crime and sorrow ? If they are pure, and wise, and happy, our creation and existence must, indeed, be to them an unfathomable mystery : and we should place ourselves in their situation to appreciate what really is wonderful on the stage of this world, and what is wonderful solely because new. We should see things with the eyes of others : we should stand off at a distance from the objects which press too closely on the senses to view them in their justness of proportion ; and then every incident of life will become a miracle and a question, which we shall strive to bring into the ordinary current of our

thoughts, and place in its true position : not imagining that this, when done, explains a phenomenon ;—that assigning a cause gives any greater abstract probability to the fact, but that falling in with a system which we believe to exist, we may guide ourselves through this labyrinth of chances by the only clue we can obtain ; that we may throw the little knowledge we possess into tangible and manageable order ; that we may guess at the future, by conjectures on the past.

There are three considerations more, which may show the impropriety of devoting the early period of life to the accumulation of facts. They are obvious and trite. First,—That facts cannot be collected, unless instruments for collecting them have been previously given ; so that the one process must necessarily precede the other. Secondly,—That the former process can be performed at any season of life, while the latter can never be made available if we suffer the time to escape us when the mind is tender, its faculties flexible, and its motions subjected to regulation. And, thirdly,—That to load the mind with knowledge before it has acquired the art of analyzing and arranging it, is the surest of all methods to stifle the development of its nobler powers ; since memory can

then be exercised solely on accidental and frivolous associations, and a habit will thus be formed, the very reverse of all solid and practical reasoning.

The main end then of all education, so far as it regards the Intellect, is to form good habits of thought, and those habits may all be classed under the three heads, of observation, analysis, and synthesis. To form them it is necessary to exercise them, and to exercise them on such subjects as will leave no faculty unemployed, and tend to no pernicious, though accidental, results. And here we fall upon the question,—whether the study of dead languages is a field of mental exercise, first, sufficiently extensive; and, secondly, less dangerous than others. When a friend complained to Lord Erskine, that a pamphlet which he had published, had been stolen and inserted in an *Encyclopædia*, Lord Erskine recommended a retaliatory measure:—that another pamphlet should be published by his friend, and the *Encyclopædia* introduced as a quotation. I fear something similar to this advice has occurred in the present observations,—that the subordinate digression has far exceeded the main enquiry. Certainly, the principal question demands no very lengthened discussion. For it is evident with our present system of public

education, that the subject on which we are to exercise the intellects of the young, should be possessed of the following qualifications.

First,—So long as education is to be carried on in masses, it must be applicable to every variety and class of character.

Secondly,—As the business of life requires that the intellect of the country should be thrown into various channels, it must be of a very abstract and general nature; not fascinating, nor absorbing, nor (if the expression may be used) very idiomatic, lest every peculiarity of mind should be melted down into one uniform mould, and all engrossed by one unvarying pursuit.

Thirdly,—As young minds are extremely susceptible, it should be a study, in which, if error be inculcated, that error may not tend to any practical evil. Every one is acquainted with the injury inflicted on philosophy and the world, when the metaphysical works of Aristotle were selected as the basis of education, and the mind was imbued in its infancy with absurdities which it never threw off: and whether such erroneous doctrines are moral falsehoods, or mere speculative errors, still if they at all enter into practice; the injury to society is incalculable.

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Fourthly,—It should be so well known to the teacher, that he may grasp and handle it with sufficient firmness, without hesitating at every step, or dreading the consequences of error; since there is nothing to which young minds are so alive, and which renders them so suspicious, and uneasy, and careless, as any want of self-confidence or indication of weakness, in those who attempt to controul them. They give up their attention with pleasure to a guide in whose decision they repose; but sink back with disgust and timidity when they add to the consciousness of their own weakness, distrust in the powers which direct them.

Fifthly,—It should be a science in which general principles may be boldly laid down with great latitude and firmness; and general principles, not simple and identical as mathematical truths, nor so complicated and susceptible of qualification and restriction as the axioms of moral philosophy, since in the one case there is little to interest, and in the other much to confuse. But such as require in their application some attention to accidental circumstances, and a minute examination of differences in combinations, without at the same

time bewildering the mind in a labyrinth of chances and contingencies.

Sixthly,—There should be in it abundant scope for producing the uneasiness of curiosity, by presenting dim and partial glimpses of things, and demanding clear and definite views, and of breaking up easy and habitual associations by enquiring the reason and the cause.

Seventhly,—It should be a science not yet perfectly developed, since we perpetually require new food for curiosity, and few will take pleasure in traversing a field which is limited to their view, and which thousands have traversed before them.

Eighthly,—Since the business of life is conducted on moral probabilities, it must be one in which there is room for guess work and hypothesis, for calculation upon chances, for selection among difficulties; not one in which the mind is formed to rigid and uncompromising demonstration.

Ninthly,—As habits of deep thought have a natural tendency to deaden our feelings, and it is a melancholy truth, that few can improve their heads, without in some degree injuring their hearts; and as purely intellectual pursuits tend naturally to substitute for the sympathies of life, more cold and inanimate pleasures, which do not

constitute our genuine happiness, there must be play for the fancy, the sensibilities, and all the warmth and life of feeling, in comparison with which the Intellect with all its boasted powers, is valueless and miserable.

Tenthly,—It should be a field for patient labour, in which many difficulties are to be mastered, many temptations to negligence resisted, and a principle of moral fortitude in the pursuit of science matured by constant practice.

And lastly,—It should supply materials for all the operations of the Intellect, for analyzing, combining, comparing, carrying on careful inductions, constructing hypotheses, tracing them out by scrupulous observation, and exercising every power, which is afterwards to be employed on the business or philosophy of life.

And when we take a survey of all the subjects on which the human Intellect may work, we shall find, I think, but one which comprises all these essential advantages.

Of mathematical studies, though admirably adapted to form the student to habits of precise and close connected reasoning, it is yet evident that many minds entertain an insuperable repugnance to their cold and unimaginative abstractions:

that when cultivated too intensely, they unfit men for acting amidst the varying probabilities of life ; that they check and deaden the finer emotions, and that to force every understanding into this channel, would be to form a nation like the people of Laputa.

In the philosophy of physics there is but little play for the feelings, and too great a demand for rigid and minute observation : no study is more likely to fascinate and engross the mind which it has once engaged, and none requires a greater number of adventitious advantages, placed far beyond the reach of many. Our knowledge of Nature is still extremely imperfect ; and constituted as young minds are to receive every thing implicitly, which is broadly asserted, and to retain nothing which is too modified and restricted, by the prospect of accidental combinations, we should either imbue them with errors as the basis of their future enquiries, or lose every hold upon their interest by the multiplied qualifications of our principles.

On the study of morals, or of the human mind in its whole compass and description, the same observations may be made, with these obvious additions.—That to turn the eye of the mind in upon

itself is one of the most painful and difficult tasks which reason demands of us, and one for which we seem in our early youth to be physically incapacitated.—That the truths of morals rest upon foundations secured more upon the will of the person who admits them, than any other principles of knowledge:—and that to involve the mind in their examination and discussion before habits of virtue were formed, would lead to most dangerous consequences.

Of History it is evident, that as a mere enumeration of facts it exercises no faculty but the memory; and though containing a field of very profound philosophical analysis, it cannot be profitably worked without a great variety of political and metaphysical knowledge, and very mature habits of observation and reasoning.

These remarks are trite, and many others equally obvious will occur to confirm and enforce them.

One Science still remains, the Science of Grammar: and in this we shall find all the advantages of the others, without any of their defects.—It is applicable to every character; it possesses no absorbing interest; it leaves the mind, when education is completed, free to throw its powers into any direction required. The errors which at present it

involves, numerous as they are, are practically harmless and insignificant. We know enough to manage it with confidence; and are ignorant of enough to open in every direction new channels of doubt and enquiry.—There is in it infinite scope for the prosecution of moral reasonings, and the weighing of moral evidence; for selection in description, and clearness and accuracy in definition; for breaking up habitual associations, and for inuring the mind to self-denial, perseverance and patience. I am now speaking of the mere study of words:—why these words should be selected in dead rather than in living languages may appear hereafter. How the study should be prosecuted to exercise all our mental faculties, is evident. For as all the facts which succeed one another in Nature are but signs of each other's appearance; signs which in themselves are insignificant, and which can only be interpreted by previous experience, just so the symbols of language are indications of some hidden idea, which we must discover from the information of its authors. And as the signs of Nature frequently appear without the thing signified, causes without obvious effects, and effects without obvious causes,—just so the words of a dead language are presented without the meanings

they imply—and these meanings can only be discovered by precisely the same analytical process which traces the cause of an effect. Without experience of Nature in the one case, without personal information in the other, we never could advance a step. What experiments are to physics, dictionaries are to philology: and if our only object was to learn a language, (and the error of supposing this is very common) the more dictionaries we accumulated, the sooner our end would be gained. We ought to form vocabularies in which every inflexion and combination of every word was accurately provided with its specific meaning; and where the ignorance of the student might be relieved without trouble, and without delay. But the main utility in the study of words lies not in the end but in the means. It is the process of discovery which should be made our chief object, not the discovery itself. To know that *καὶ* means *and*, and *δὲ* *but*, is of very secondary importance; but to ascertain the fact by our own enquiries is infinitely valuable. If we would derive from philology all the fruits which it is capable of bearing, we should close up our lexicons and grammars, and set the student vigorously to grapple with the unintelligible signs of dead languages, as modern

ingenuity has grappled with the Egyptian hieroglyphics. Some knowledge of some signs he must possess as the basis of his operations. Let it be given him scantily but accurately : provide him with some primitive roots ; the meanings of some inflexions ; the primary signification of a few common terms.—With these let him set to work, as the natural philosopher proceeds in unravelling any intricate phenomenon ; as the general in contriving a complicated manœuvre, or the poet in rousing a mixed passion, or the moralist in developing the principles of metaphysics. These roots and meanings he will find recurring in many different and unknown combinations. Each of them let him analyse into its primary element : if the meaning of those elements has been previously ascertained, a new conjunction has been added to his store. If not, let him look to the context, to the meaning of the words around him ; let him hazard an hypothesis. The next time the same combination recurs let the hypothesis be tried again. Is it born out by this second case ? Let the experiment be repeated as often as the combination is met, and each time with a scrupulous analysis of its parts and circumstances. When it fails he must substitute another, and try it in the same manner. A

careless naturalist, from the frequent and uninterrupted repetition of a particular conjunction, will infer that it is necessary and universal. And a careless scholar from the general adequateness of an idea to make sense of a word, will conclude that its sense is ascertained. The error in both is the same,—and the remedy also the same. A perfect induction must be made. This the naturalist cannot attain, for his experience is not universal: and the scholar can scarcely attain, for to collect every use of the word would be a labour impossible to undertake, and even then the enumeration is imperfect, since our records of the language are defective. The naturalist must suspend his judgment, or look to final causes, though with jealousy and care: the critic must also be diffident, or turn to the principles of metaphysics, or the information of history, to confirm the universality of his theory. Again, a physician observes that the same medicine which cures one man, causes death in another. And the scholar perceives that the same word must frequently be used in different senses.—In the one case there is the same apparent cause, and a different effect: in the other the same word and a different meaning. But the physician is aware that similar causes do produce similar effects, and the scholar that the same sound

is seldom employed to express perfectly dissimilar ideas. Both are to discover the points of resemblance which are combined with the points of difference.—The physician must accurately analyse all the circumstances which preceded his effect.—The scholar must critically trace the primary meaning of his word, and deduce all its secondary senses from the various relations which it includes. The mode in which analogies may be pursued in the study of words has been previously illustrated. The power of obtaining definitions is necessarily confined to this science. And it is exercised whenever we limit the meaning of a word or combination by taking a number of instances and extracting the one common feature. No exercise for the reasoning powers combined with an imaginative faculty is so strengthening to the mind as the reduction of anomalies in grammar under simple and acknowledged laws. The process is precisely the same as the explanation of natural phenomena. As the slightest inflexion of a word distinguishes a particular meaning, nothing is so easy as to form a habit of minute observation. As the signs are in themselves unintelligible, the interest of curiosity is constantly on the stretch to obtain some light, which may strike on them and make them vocal. As every addition

to our knowledge must be obtained by the application of our acquisitions, we must exercise those habits of arrangement which will render them constantly serviceable. Memory, imagination, induction, analysis, attention, comparison, and discrimination, with all the other faculties and operations which fall under intellectual excellence are as necessary to the study of words, as they are to the profoundest philosophy. In repeating previous associations, which we do in composition, we attend to the same laws which bind the chemist in constructing his experiments, or the physician in administering his medicine. The same careful observation and selection to ascertain the precise similarity of the case is necessary in all. And thus whatever be the nature of our subject, the same primary mechanical powers of the human mind; however combined and directed, are the instruments by which we act, and which it is our business to improve. Whether the materials be marble or stone, the tools of the mason are the same. And so are our intellectual faculties, whether we employ them singly or together; in tracing out a theory, in polishing a poem, in constructing a pile of reasoning, reducing facts to elementary principles, or in cutting and clearing our way through a novel

and intricate science. But the science of words is not only an exercise for the intellect.—Its intrinsic value and importance is far greater than is sometimes acknowledged. Without striking deeply into the question it is certain that we think by words ; that they assist us in reasoning as much as the tables of logarithms assist men in calculation. To be familiar with their forms, dexterous in their uses, discriminating in their senses, is no mean excellence, no little step to intellectual superiority. Sometimes they serve as the bits of coloured glass in kaleidoscopes, which thrown confusedly together fall by chance into new shapes and strike out new models for the fancy : sometimes they form the common link which drags up resemblances and analogies : sometimes they abbreviate whole trains of thought, and condense them into one short, compact, and easily retained expression. Sometimes when the flow of ideas begins to stagnate, our words run on in a sort of under current which keeps the mind in motion, and throws it into new channels. And they perform these offices simply as words, without reference to the knowledge of things which they necessarily involve. And if their use in thinking is great, it is still greater when we come to write ; which we never can do with ease without

considerable experience in their management, and attention to their structure. Dr. Priestly is said to have acknowledged that whenever he wished to make himself acquainted with a subject he wrote a book on it. The principle may seem paradoxical, but it contains much sound philosophy.

By writing we become aware of our ignorance, and this is the first step to knowledge. We meet perpetual checks, which in thinking we slur over. We are startled at general principles too rashly assumed, when the eye permits us to dwell on them. The mere delay arising from the manual labour is very beneficial. It fixes the attention ; makes us rest on each separate point ; and suffers every thought to throw itself into various lights, and strike out in different relations. When one branch of our enquiry has been committed to paper we consider it as secure, and turn our whole undivided observation to that which follows, so that no part of a subject escapes without some consideration. Even the child-like pride of creation (for the littleness of the human mind is sometimes as strong as its greatness) gives an interest to enquiries thus pursued, and stimulates our search for information. No man can attempt to write without discovering the necessity of order and arrangement. We may

think on a subject and read on it in detached portions without any plan or connection. But we cannot write on it without some sketch to guide our pen. We soon become lost and bewildered, without knowing where to commence, how to proceed, and when to finish. And not only is a general outline thus procured from necessity, but all the subordinate parts and details are brought out and accurately adjusted.

Architects have sometimes been known to give plans for houses without a staircase, and insert fire-places without chimneys, and when our views on a subject are confined to our own thoughts, we are very apt to be guilty of similar omissions. When, however, the plan of the architect is embodied in brick and mortar, the mistake is detected at once ; and when our thoughts are laid down upon paper, all the blanks to be supplied, the connections to be discovered, the restrictions to be drawn, become obvious in a moment. It is wonderful also in writing, with what an instinctive alacrity, as it were, all the vague and floating ideas which are playing about in our minds like motes in a sun-beam, leap together into regular forms and class themselves by natural affinities. Every thought that merges to the surface is instantly seized by a sort of attraction,

and fixed in its proper place and peculiar groupe. And thus it is that a habit of writing is such a powerful instrument of knowledge, that it gives men such harmoniousness, and comprehension, and grasp, and accuracy of thought; and that if we wish to gain a full acquaintance with any subject, we ought to follow Dr. Priestly's principle, and write a book on it;—publication is a separate question. But we cannot write without words. We cannot cultivate land without a spade or a plough, or pursue navigation without sails and cordage. And the management and controul of our instruments is in all these cases, just as much a matter of science as the subject on which we write; or navigation, or agriculture itself; and it can be acquired in one way only—by regular practice in handling and employing them, and by a thorough insight into their nature and uses. I mention none of the nobler ends of language as the medium of communication between man and man: how it spreads truth, and corrects errors, and diffuses good, and purifies our moral atmosphere; how infinite its range, how incalculable its effects, how unbounded either by space or time the sweep of its energies—how useless is knowledge without the means of imparting it to others, and how glorious the

power of subduing and controuling by our voice the tumult of human passions, and directing all the moral springs which put in motion the universe of men. And yet it were no mean ambition to look on the spiritual system by which we are surrounded as we should on the worlds above us, and consider that we are to our fellows, as Nature to the whole fabric of matter : that if she by a law of her will can wheel the planets in their orbits, and keep the sun in its seat, and send the comets as she chooses into the opposite extremities of space, we also have our laws and our empires over worlds of sentient spirits ; we can roll on in obedience to our words the movements of life and of states ; we can keep the great elements of good fixed firm as the centre of our system ; we can send by the strokes of our pen thousands of animated beings into an eternity of happiness, or drag them down with ourselves into an eternity of misery.

And if, the dominion of Nature being put into our hands by some miraculous dispensation, it were a grievous offence in us to neglect such stupendous duties as the controul of the material universe ; to let the stars break from their place, or the courses of heaven be suspended ; is it not a crime as enormous, now in our present condition, not merely to

pervert for the ends of evil, but to abandon or think light of the moral dominion we possess, to care little for the power which God has entrusted to our hands, to make no efforts to attain it, to cast away the occasions of its exercise ; to let the moral universe break loose from its seat, and all the elements of life fall round us into chaos and disorder. And yet that we possess this power, that we are guilty of this crime ; all of us not actively watching the little worlds entrusted to our care, is no fiction or exaggeration of truth—it is the bare fact ; it falls short of the truth ; for the reign of Nature is over brute and inanimate matter ; our reign is over sentient spirits. They move round us in separate systems, gravitating to their several centres, and borrowing from each other, and from it, the tones and reflexions they assume. Their path is shaped by ours : if we decline, they must follow. If we keep steadfast, they will keep steadfast also.—And we know not the infinity of space through which our influence may be propagated. When we look from the narrow sphere which immediately surrounds us, to those progressively expanding circles which stretch out into regions unknown, through all the diverging relations of children, of friends, of country, of all who can be brought within the action of our

thoughts, our words, or our deeds—who shall presume to force the limits of his own power? Who shall dare to sit careless or unmoved amidst such an awful emanation of good or of evil? Who knows that a single neglect, a momentary oversight, a truth suppressed, an argument unurged, a sophistry undetected, an advice withheld, may not break out into the ruin of thousands? Or who will not cherish the hope that his may be an effluence of light, and not of darkness? Who will not be anxious to evolve some portion of happiness and good? Who will not struggle to obtain the means of diffusing his influence?—And shall we then look upon language as an useless or contemptible science. Shall we think it unworthy of our efforts to acquire such an instrument of power? Or is this one consideration alone sufficient to justify a system which devotes the first years of our life to that which should be its first object.

But why should the study of words be carried on in the languages of other times and countries? Why not direct it to our own tongue? Why not endeavour to unite with the exercise of our own faculties as much positive accumulation of knowledge as lies within our reach? The poetry and eloquence of Greece and Rome are the earliest and

principal field of our philological labours : not its history and philosophy. And when we wish to lead the mind into these more practical sciences, we still confine him within the limits of a past age, and prefer that he should grapple with facts which are very remote from his interests, and with principles which we know to be defective and erroneous, rather than with the records of his own country, and the more accurate systems of modern research. It certainly seems paradoxical. It looks like a prejudiced adherence to antiquity, for antiquity alone.—And it is I believe a prejudice, but like many others of our good old-fashioned principles, it involves profound and extensive wisdom. We feed the young mind with poetry and oratory, because we think his heart of more importance than his head. Because there is no poetry and no eloquence which does not appeal, or seem to appeal, to our nobler and better feelings. It is their essence and end. And even the indulgence of the fancy amid creations of physical beauty enlarges and purifies the mind. It takes us from ourselves and our selfishness. It gives us a sympathy with the world around us : it makes us happy and cheerful, and happiness and cheerfulness are our states of nature in which our moral virtues most easily take root

and are developed. And there is a close analogy, perhaps something more than an analogy, in our perceptions of physical and moral beauty. Our sense of vastness in the material world, and of grandeur in heroic virtue ; our tranquillity and contentedness of mind, and our repose in the simplicity of objects, which we perceive by the senses ; our buoyancy and exhilaration of moral feeling, and the life and energy of sensation which springs from external impressions ; all these respective sensibilities have a striking and close similarity.—They might, if this were the place, be severally traced to the same simple principles ; so that purity of taste and purity of moral feeling might seem to be more closely connected than is generally allowed, and that any disposition of mind to receive and discriminate the one class of perceptions, might fit and prepare it to be susceptible of the other.

And we wish to produce this disposition in the morning and dawn of life ; because we know that if we seize not on the moment when the heart is glowing and tender, glittering with freshness and dew, and thrilling with the first pulse of existence, we know that a time will come when all such efforts will be vain—when the bloom of life will be gone, and the springs of feeling be dried up, and the

whole soul become withered and parched by the cares and the passions of the world. And lest this excitement of sensibility should encourage a false enthusiasm, we temper the fervour of poetry by the coldness and chastity of writings distinguished for purity and sobriety; we soften down any violence of feeling by the medium through which it is conveyed. And as we wish to create not poets but high-minded men, we bring before them models of antiquity, which excite no anxiety to reproduce from the difficulty of working such materials, and imbue us with the spirit of their beauty, without a servile imitation of their forms. And when the reason must be gradually bent to more rigid and severe application, and exercised in the abstractions of science, we think it wiser and safer to place it where no bias or taint may be contracted from its necessary communication with error. It may be that Locke is a greater philosopher than Aristotle; Paley a more practical moralist; and Buffon a more eminent naturalist; and that all the foundations of science are laid down more firmly in modern inductions than in the theories and visions of the ancients. And yet, so far as the exercise of our faculties is concerned, we would rather employ them upon Aristotle than Locke, upon Cicero than Paley.—

Why?—Because there is no fear lest when the student is playing with them rashly, they should wind their way into his opinions, and fill him with principles of error.

*Cum dabit amplexus atque oscula dulcia figet,
Occultum inspirent ignem, fallantque veneno.*

We have no implicit trust in any discoveries of science. We have no wish to bend the mind down to any system or theory of others. We would give it the faculty of judging for itself. We would accustom it to analyze and sift the mingled elements of truth and error which run through all human productions: that, in a full and manly independence, it may select, and reject, and combine, when arrived at the maturity of its powers, according to the scrutiny of reason, and not to the dictates of authority. And we think it safer to form this habit where there is no temptation to be deceived; where we know that errors exist, and can explain and refute them; where no reverence exists to bias us: and all authority is annihilated by the absence of the sanctions of religion, than amidst writers whom we love and respect,—whose opinions have not yet been tried by the test of lengthened experience;—whose errors are partially concealed by the name and the faith which they profess,—and

who leave us, from our ignorance, when refuted, no substitute but doubt and perplexity. We are less likely to fall down before an idol of wood or stone, than before a living and breathing image. On the dead and inanimate forms of a remote antiquity, we can gaze with curiosity alone ; but the moving and sympathizing realities, which meet or clash with us in our course, must act upon our feelings and opinions.

And if it lastly be asked whether the whole of our youth should be spent in exercising the powers of the intellect, without augmenting its stores of information,—the answer is, that those stores are augmented ; that we lay by this system a very solid foundation of practical and useful knowledge,—and of knowledge which, if not attained at a very early period of life, we never should be able to communicate. There is no little practical utility in an intimate acquaintance with a language most accurately philosophical ; most copious and refined ; and more frequently selected than any other as the depository both of modern and of ancient science. Nearly the whole nomenclature of science, and, within it, a large portion of its facts and principles, has been stamped in Latin and Greek ; since few other languages are so extensively current, and none afford

such facilities for new and complex combinations. The key to botany, to chemistry, to geology, to every department of physics, in which new discoveries have been invested in new terms, is placed in the hands of the Greek scholar. It is no slight advantage to master, in one compendious process, the dry and fatiguing rudiments of so many sciences. It is a still greater advantage to possess the basis of modern European languages ;—to have learnt, in one single vocabulary, the elements and forms which, however complicated and varied, make up the greater portion of those dialects, with which we are compelled to be familiar. It is to descend a variety of streams from a source already discovered, instead of remounting the currents, and tracing them severally to their head. The historical records of Greece and Rome are no less valuable to the student. They exhibit human nature, and forms of society, in very singular and interesting modifications. They place us at a distance from the phenomena we contemplate, and enable us to view them in their true colours, and accurate proportions. They include the germs of many of our noblest institutions. They give us salutary lessons, without pressing too close upon our prejudices and interests ; and trace out the

working of principles which we are called on to develope and apply in all practical reasonings on society. No man can place the past by the side of the present, without great and important truths flashing full upon his mind ;—truths which we are apt to overlook when our view is confined to the present :—comparisons which wonderfully enhance the value of all that we possess ;—principles which carry us far into the universal system of things, and throw into order and reason the chaos of human affairs.

And so of that ancient philosophy, which, in the pride of our modern discoveries, we are too apt to depreciate and despise. We have, indeed, by a single instrument, properly applied, penetrated farther into the mysteries of the material world, than man has ever done before. Unless, indeed, analogy might suggest the existence of even greater cultivation in a very dark and remote antiquity. But in the moral world, by mere human agency, little has been, and little can be, discovered. Nature has not left the instincts which are necessary to the existence of man, at the mercy of his diligence or refinement. And where the philosophy of the ancients is sound and practical, there it is the architype of the modern : and where it wanders

into jargon and absurdity, it serves like the drunken Helot, to guard and admonish us, and demonstrate the danger of trusting exclusively to the reason of men. The very disgust is useful. It gives a relish for sound common sense : and we spring with delight from the dreariness, coldness, and barrenness, of the Greek metaphysics, to the warmth and interest of enquiries carried on by the Baconian induction. And let it be remembered, that if these regions of knowledge are to be visited at all, they must be visited when we are young.

If we wish to encourage in the student a habit of rational curiosity, we must send him for his own information wherever it is accessible to him,—not allow him to receive it from others. And translations are as unsafe a medium of knowledge, as they are an inducement to indolence. If it is a difficult thing to transfer the bloom and fragrance of one language to another, it is also no easy matter to secure the substance and fact. Both are very likely to evaporate or be altered in the process of transmutation. But in a more advanced age, to bring our thoughts, distracted by other interests, and uncontrolled by authority, to the dry and harsh study of a dead language, would reverse the order of Nature, who has endued young minds with a

certain firmness and insensibility to intellectual torture, (and the study of a grammatical system can scarcely be described in a milder term) just as she made the young shoots and buds of trees less sensible to cold than more advanced vegetation. To enter spontaneously on the study of a dead language, wrapt up in unintelligible signs, and to follow it into all its details, is a very rare, and very difficult undertaking. It requires a more powerful stimulus than can be generally applied. It exhibits a moral fortitude which very few can command. And we find universally prevalent such contented acquiescence in all which relates to our immediate interests, such reluctance to retrace the stream of time, to carry back our thoughts to remote and impalpable subjects, that if we did not transport the mind into such considerations, while yet we possessed the control of it, our attention would be fully absorbed by the tangible and visible objects, the present moment would be all in all; a few every day interests and associations would swallow up all expansion of thought, and leave us ignorant, selfish, and narrow-minded.

There are only two other considerations which I would here urge; and if two may appear fanciful, the last is obvious and acknowledged. The

profound sense and good feeling of our legislative system; amidst all its zeal for political equality, has always been anxious to maintain that natural order of things which grows out of a distinction in ranks. Now, in the present day, when knowledge is rapidly becoming, to a still greater and greater extent, the idol which we worship, it is evident, that to preserve the balance as it hangs, to keep this hereditary dignity tolerably stable and permanent, and to prevent an influx into the higher stations of society, of minds which, apart from knowledge, possess no single claim to such situations; we must give to the more elevated ranks some one kind of knowledge which shall be exclusively their own: and will attract the admiration of the vulgar, from the mere circumstance of its not being common. Such exclusive and not useless knowledge is communicated in the dead languages, and in the studies with which they are connected. The abstractions of poetry, of history, and of morals, are not likely to engage the attention of those who are working for their daily subsistence. The obstacles are numerous, and the advantages remote and precarious. And while we are zealously diffusing knowledge through every division of society, it may be well to select and discriminate, and give to the poor

what is practical and useful; to the rich what may rather be considered as the luxury and ornament of learning.

Secondly, it is perhaps advantageous that we should check in our system of education, as applied to the more elevated ranks, the tendency of the present age to reduce every pursuit to some tangible, immediate, and mercenary end. That we should liberalize the minds of the young, by engaging them in occupations which have no taint of sordid calculation about them; and accustom them to feel an interest in objects without an unceasing recurrence to ulterior and utilitarian ends.

But however this may be, there is one last consideration, before which all others fade into insignificance. In the Greek language are deposited the records of our religion. Whether some little toil be not well repaid in obtaining from our own observation a satisfactory assurance of its truth:—whether it be desirable to fortify a rational confidence in the correctness of our tenets, in the accuracy of our facts, and in the consequent stability of our hopes:—whether the means of defending our belief against infidelity and error, be an object so perfectly valueless; and whether it be useful to maintain a perpetual supply of defenders. among

those whose example is authority, though we fall in with the course of Nature, and risk an occasional waste ; these are questions which may press home at times even on the thoughtlessness of youth. They require no answer but our own conscience ; and swell, at a moment's contemplation, into a magnitude which absorbs all the others.

Such appears a legitimate view of our present scheme of education, when we look to its capabilities and tendencies. Nothing, indeed, should be more forcibly impressed upon the mind of the student, than the object and utility of his studies : and no error be more diligently eradicated, than the belief that the grammar of dead languages, the rules of Aristotle's logic, the thorough digestion of his ethical works by chapter and page, the power of naming every consul in the history of Rome, or the number of men in every battle in Greece, is the end and object of education. If playing with pebbles, and counting straws, could exercise the powers of his mind, like the study of philosophy and antiquity, and save him from this capital mistake, his time would probably be as well employed as it is at present, and the results be far less mischievous. His end is not so much to acquire knowledge, as to improve his faculties. He is collecting and per-

fecting his implements for building, and the materials will be always at hand, and put together the moment they are wanted.

How far we extract from this system all the good which it evidently contains, is a separate and more delicate question.

So far as we make the study of language a matter of mere repetition ; so far as we render the student not a critic and inventor himself, but a mere parrot-like retailer of the criticisms and inventions of others ; so far as we slur over difficulties, and habituate ourselves and him to vague notions, to a neglect of precision, and a thoughtless adoption of errors,—so far we completely abandon the object and use of education. While our grammars are disgraced by the most gross and glaring errors, and our dictionaries heaped up with words undigested on the principle either of analogy or etymology : while we study to conceal our ignorance by cloaking with high sounding terms anomalies which we cannot explain : while we shrink from philosophical attempts to simplify rules and to reconcile exceptions, and are content to impose under the authority of names, the principles which ought to be presented as questions to be solved by the reason—so long we are not discharging our duty, or

benefitting those who are entrusted to us. An enormous sacrifice of time is made to the study of dead languages, and we ought to reap from them a great and proportionate advantage. But we never can be adequately repaid by the most minute and accurate scholarship, if scholarship is all that we attain. It is of little comparative use to know what Bentley or Porson discovered : but it is an inestimable exercise to trace the process which they pursued, and to follow the same ourselves. It is of trifling importance to know the meaning of every single word in the Latin and Greek tongues : but the labour is ten-fold repaid if we make those discoveries ourselves.—It is the search for the treasure, not the treasure itself, which is to compensate our toil. We should form our own grammars and our own lexicons. We should extend our own researches, that we may direct others to new truths by the same road, but by their own exertions. They are not to be led blind-fold, without energy or will of their own : but our knowledge must be dissembled, that their interest may be watered into life. And when we place the student before a dead language, to grapple with it manfully and closely ; giving him at first but a few data as ground to stand on ; throwing in others as new materials are required ;

leading him on imperceptibly so as to make every truth and every word a discovery and not a precept ; teaching him how to observe, and analyse, and distinguish, to frame hypotheses, to try their validity, to practise cautions and extensive induction, and to weave not a simple combination, without an accurate perception of its meaning ; then, and then only, shall we apply the science of words to its real and full use in education, and send men into the world, not wearied and disgusted with the discipline to which they have submitted, but satisfied and pleased with their labours ; with their minds invigorated and sharpened, and ready to engage in every pursuit of science or of life, with benefit to themselves and to mankind.

APPENDIX.

APPENDIX.

(a)

There are two metaphysical positions which have generally been looked on with suspicion and alarm by the friends of religion : our perfect ignorance of every thing but the states of our own mind, and our entire subjection to acting external causes. Instead, however, of struggling to deny them, from the dread of their consequences, if their bearings were rightly foreseen we should find them the very firmest foundation for the truth of Christianity. If we were admitted to view a magnificent palace, filled with innumerable persons in situations of perfect happiness, communicating constantly with each other, and living all under one supreme direction ; if, after satiating our curiosity with this spectacle of splendour and luxury, we were taken to a corner of the building, and were there permitted to peep down into a cell, in which a number of beings were confined, perfectly excluded from the glories around them, and so blinded as to re-

cognize their own associates solely by signs ; if we saw these beings struggling to obtain some insight into scenes with which they were so closely connected, though shut out from their enjoyment and yet unable by any efforts to burst open the doors of their prison, or discover for what, or by whom, or how they were placed there ; I think our surprise and compassion would be in some degree aroused at the sight. I think we should be apt not to think their condition so enviable as to require no communication from above, but to ask why such communications were not constantly made, or why it was thus necessary to insulate from the rest of the palace such a miserable portion of its inhabitants. We should hear, I think, with some surprise, that information which had been conveyed to them by means of voices and messengers, and all the other means which circumstances permitted had been thought unnecessary, and rejected as superfluous ; and that with a full conviction of the existence of something very glorious beyond their reach, they neither wished nor expected to receive any communication from without ; and contentedly acquiesced in their own perfect ignorance and helplessness. And let *us* look up to the heavens when they are filled with the stars and planets, and ask

ourselves whether a revelation from such a fabric of the universe may be expected in this corner of it, or ought to be longed for by our reason. And when we have thus contemplated our exclusion from the worlds which surround us—let us apply a similar parallel to the condition of each individual mind.

Let a man be startled from a profound sleep, and find himself in utter darkness, without knowing where he is, or how he was brought there. Let him be conscious of sounds falling on his ear, and shadows passing before his senses, and discover when he struggles to grasp them, that he is bound hand and foot, without the possibility of moving. Terrify him with all kinds of horrible visions, and let them appear in a wild and disordered succession, to keep him in perpetual dread of some new and fearful change. Let him feel pains which he cannot relieve, and wants without the means of supplying them. Torture him with the restless enquiry whether the whole be illusion or reality ; and make him feel, that if illusion, it is one without relief ; and if reality, he lies amidst a chaos of blind chances ; at the mercy of a capricious uncertainty ; without a light to guide or a voice to warn amidst the perils and tumults that surround him.

Place a man in this situation, and I know not how long his mind could endure it without madness : but I do know that its agony would be one the most intense which human nature can feel. If then a voice should be heard, commanding him to be tranquil—telling him that he was placed there, not by an arbitrary caprice, but for a wise and benevolent purpose : that he must be content to lie there in his fetters, till the period arrived for his release : that what he saw and heard was no illusion, but reality ; and that the time would assuredly come, when light should strike into his dungeon, and the chains fall off from his limbs.—What would be the first burst of feeling at such an annunciation ?—Surely gratitude to the being that made it : then the wish that it were true ; then the fear lest it were false ; and then the cry of doubt and alarm : “ How shall I know that this voice also is not a dream.”—And if the cry rung through the darkness, and there was no answer, all would be doubt again. But let the voice be heard a second time : “ You demand a sign, and I have none to give you. It is night, and you cannot behold me. There is a gulph between us, which I cannot pass ; and your chains cannot be loosened : you can have no sign.”

Would not even the burning thirst after certainty be allayed by the impossibility of attaining it; and the mind sink again with composure into confidence in the reality of its monitor. But let the voice speak a third time : “ I can indeed give you no sign : I cannot shew myself to your senses : but I will do more : I will teach you even in this dungeon how to be happy. I am he that made you, and placed you here ; and that I am so, you shall know by my revealing the secrets of your heart.— I demand of you only to be happy : you must give me your heart, your whole, undivided heart ; that heart which was made by me and for me, which can find no rest without me, and with me even here is in heaven.—Love me, who created you from nothing ; who have formed you with such capacities for good ; who have contrived even here to provide for them ; and who promises their fulfilment hereafter. Love me, and this dungeon shall become a palace ; and the darkness shall be turned into light ; and the forms that pass before you shall wear the faces of angels ; and the passions that torture you now shall sink into peace ; and I will be always with you by day and night, in sorrow, in sickness, and in pain, to answer all your prayers, and grant you all your desires. And you shall feel my pre-

sence in your heart. And I will watch over, and guide, and comfort, and protect you: and though I am infinite, and you finite: I am omnipotent, and you nothing: I am pure, and you corrupted, I will dwell with you, and love you, and bring you into my presence; and I will be to you a father, and you shall be to me a son.

If such were the promises held out, what would be the mind to reject them, because the Being from whom they proceeded, was not visible to the senses? What would be the mad incredulity which would refuse at least to make trial of their truth? If, on looking into his own breast, he found that a perfect devotion of the heart to some great and omnipotent Being, must constitute the essence of his happiness: if, at every approach to that perfection he felt his wants diminish, his uneasiness composed, his hopes elevated, his passions tranquillized, his pains lulled and relieved, and a pure and calm delight suffused over his whole existence, would he doubt any longer: or even now might an evil suspicion steal in upon the fulness of his joy? "Oh that I had a miracle to confirm me! Tell me what is in my heart; shew me your omnipotence by changing the state in which you say you have placed me; give me the same proof as pro-

phesy and supernatural power; suspend for me some law of Nature, and let the proof be absolute and full, not struggling through a cloud of testimony, or the fallaciousness of my senses, but in my own heart—in my own knowledge—indisputable and eternal.” Would not the doubt be folly, and the demand madness? and yet with a lavish contrivance, unparalleled except in the boundless profuseness of Nature, that voice which speaks to us in our dungeon—that voice which falls from heaven upon the horror of thick darkness which surrounds us, does answer us even here. Take up the bible in ignorance of the human mind, and it is full of mystery and perplexity, strewed with unmeaning facts and useless communications, sometimes, unconnected in its parts; and at others, inconsistent with its end. It is as an unknown language, as a prophecy not yet fulfilled, as a key most elaborately contrived, to one who had never seen a lock. But lay bare the human heart, and human intellect beside it, and in a moment ten thousand hidden truths start up in all the fullness of life. Not a syllable but tells; not a fact but illustrates; not a principle, or doctrine, or method, which does not fall aptly and necessarily into one grand but most intricate system. The bible is

the human heart, and the human heart is the bible,—so that, given Christianity to discover the being for whom it was intended, that being must be found to be man: and, given man to invent a revelation for him, that revelation must be Christianity. Now, what is this but prophecy, or at least, a prophetic power? Who is it that has thus developed the innermost springs of our heart? who is it that is thus found possessed of such a knowledge of this intricate machine! It must be either He that made it, or he that has it in his hands: it must be either God or man; but it is not and cannot be man. Did the age when the bible appeared, know one tittle of the science of mind? Has all the philosophy in the world, from the creation to the present moment, been able, by itself, to attain such a knowledge? or, were they who promulgated the gospel, the men to have acquired or understood it? And if this be not sufficient, how is this knowledge displayed? Is it thrown into a regular system, conveyed through induction and proof, laid down with all the pomp of invention, cast, in short, into that shape and order, which, had it been the discovery of man, it naturally and necessarily would be? or, is it precisely the reverse? No system, no order, no ar-

gument ; principles broadly enforced, without even an attempt at a proof ; facts confidently asserted, without a single appeal to experience ; hints scattered and mixed through a mass of unconnected materials ; truths, the most important to the scheme, sometimes involved in implications, and sometimes concealed in deductions, which we are left to infer for ourselves. Is this the work of a philosophy proclaiming to the world discoveries and reasonings of its own, or is it the natural offspring of minds who received what they announced entirely from superior authority ; who were not aware of the extent and the bearings of what they unhesitatingly asserted ; who were ignorant of the system which they were employed to unfold ; who knew nothing but from the inspiration of God. Take but a single instance :—What is the basis of all Christianity ? It is the love—the intense—the undivided love of a Divine Creator. Where is this principle found ? Is it put forth in the face of the whole ? Is it guarded as the key-stone of the arch, or is it never laid down but once in the form of a legislative precept.—“Thou shalt love the Lord thy God with all thy heart, with all thy soul, and with all thy strength ; this is the first and great commandment : and the second is like unto it ; thou shalt

love thy neighbour as thyself: on these two commandments hang all the law and the gospel." But what is the object of this law? a law of Revelation must be referable to a law of Nature: it has no obligation whatever, insulated and bound down as we are, except from such a primary principle. But the grand and universal law which grasps and binds together the whole moral universe, is the duty of making ourselves happy. Then the first great commandment of the bible, must be the first great commandment of our instincts. Are they different, or the same? The same, precisely and completely. To love the Lord our God with all our hearts, and all our souls, and all our strength, is the *summum bonum* of our nature. It may be proved, to mathematical demonstration, that it is so. Let me ask, if those who asserted it, were aware of this demonstrative reasoning; or even if they were fully persuaded that such was the result of their principle. They bid us, indeed, love God, but they nowhere endeavour to prove that such a love must be essential to our happiness. Again, how is this love to be produced? God forbid that I should dare to say that the whole scheme of Christianity was contrived for this only purpose, that it has no connecting link with things

which are hidden in night; but here again it is demonstrably certain, that no other system could produce it, and that each single link in the chain seems wondrously and solely contrived to answer this wonderful end. It may be proved, I say demonstratively, that every fact and principle of Revelation is absolutely necessary to the object—that the relation of man to the Trinity—the doctrine of the Trinity itself—the humanity and divinity of our Saviour—the Atonement, with all its particulars—the miraculous influence of the Spirit—the sinfulness and helplessness of man,—that all these are essentially parts of a scheme to accomplish this end,—that, strike off a single part, and no human power could enable us to fulfil the one great commandment, and love the Lord our God with all our hearts, and all our souls, and all our strength. Did the preachers of the gospel invent this scheme to support their principle; or were they ignorant alike of its extent, and of the tendency, the whole, united, systematic, tendency of those features in the gospel to enforce it. They are totally silent on this point, and they leave us but one conclusion:—they were either consummately good, to imagine so perfect an end, and consummately wise, in discovering the means to accom-

plish it, and, at the same time consummately wicked, in the fraud they employed, and consummately foolish in sacrificing life to maintain it: they must have been, I say, these same men, at the same time, either perfectly good and perfectly wicked, perfectly wise and perfectly foolish, or—they must have been inspired. We may take which alternative we choose, and, for myself, I prefer the latter.

But we demand a miracle.—If, instead of a reasoning discussion, we saw a mountain cast into the sea, or the dead raised up from the grave, we would believe in Christianity. We think so, indeed, but the thought is a delusion; and there is no metaphysical truth more certain, than, “that if we believe not Moses and the prophets, neither shall we believe though one rose from the dead.” And yet, even here, there is no escape for the sceptic, if we allow the fixed influence and agency of causes on the mind. Let him look into the human heart, and lay down the laws on which it acts, and then calculate, rigidly calculate, with these data ascertained by induction;—let him then see what the world was before Christianity was known, and what it is now, whether the change is for the better or for the worse,—and I think he

will find to a certainty, that human nature could never have been brought into its present situation and form, but by some supernatural agency : that no heathen mind could have devised the essential peculiarities of Christianity : that its principles, and motives, and actions, and end, were completely beyond the reach of our nature ; not only in a general sense, as too spiritual and high for our conception ; but as physically incapable of finding an entrance into the human imagination. . Prove this conclusion, and we have a miracle, a permanent miracle before our eyes ; a suspension of the laws of Nature, as perfect in its kind, and tenfold more convincing to the reason, than if we saw a river roll up hill, or a stone hang unsupported in the air. And if this be not sufficient, every single individual among us, if the promises of the gospel are true, may experience such a miracle in his own person ; may feel his heart changed, he knows not how ; may find new desires springing up, and old passions dying away, and the chains of habit falling from him, till he becomes a creature totally different and renewed, in a mode which he cannot understand, but which he never could have accomplished for himself. With what frame of mind we ought to pray for such a miracle ; with what deep

and abasing humility; with what utter distrust of ourselves; with what a glow of earnest hope, and confidence, and joy; casting ourselves as children before a father, entreating pardon for our ignorance and presumption, it is not for us now to enquire. Whether that man will be heard in his prayer, who doubts till he has felt such a miracle, God only knows; but he is not far from belief, who wishes and prays to experience it, and he will not require it as a proof within himself, who knows enough of the human heart to see evidence of its reality in the world that externally surrounds him.

If the whole of this argument is sound, and I know that the premises are asserted without any attempt to demonstrate them, this conclusion is immediate and certain.—That no man can deny a God, or doubt revelation, or pervert and mutilate its tenets, without being (I cannot qualify the expression) either intellectually or morally, a fool. Intellectually, if professing to be wise, he is ignorant of his real condition; and morally, if, knowing that condition, he rejects the only mode of improving it. He either does not know the situation of his own mind, bound down as it were, in a dungeon, without a ray of light to reveal the secrets around him, perfectly helpless and ignorant,

and in torment when awake to reality ; or he is perfectly blind to the means by which his condition may be relieved ; or, what is the only third case, he knows his condition, and he knows its remedy, but refuses to employ it, from the wish of obtaining what he knows to be impossible.

But why lay stress upon an argument whose premises have never been proved ? Because every link in the proof may be fully and indisputably established : because, practically, every Christian will acknowledge them ; and, it may be some good for a philosopher even to doubt them : because even unproved assertions are useful, when they serve, like the queries of Newton, to throw the mind into definite researches : because it is of inestimable importance to shew the value of a depreciated science ; to point out its bearings upon our dearest interests ; to prove that there is no connection between the study of the mind and the neglect of religion, or between any science whatever, and distrust in the truths of Christianity :—and because, in the present day, the argument is one to strike home, where all other evidence has failed. It attacks a false philosophy in its strong hold of metaphysical pride : it blends itself with

researches, in general, most remote from religion : it enables us to come on infidelity unawares : to attack it by a covered way, to spring a mine on it when least expected : and it promises to influence the heart, not merely to silence incredulity. It is worth the endeavour to ascertain it, and that endeavour we are bound to make. Let us enter into the science of our minds, as into a desolate and abandoned region ; peopled, by the follies of others, with all the absurdities of fiction : let us advance soberly, and cautiously, and resolutely, not falling into snares, or starting at shadows ; not measuring our present discoveries by the interests of former presumptions, but with the clue of the bible in our hands, ready to retire where we cannot advance ; with the strong hold of our religion behind us, and the hope of turning many to righteousness, as the prize to encourage our labours : let us not abandon even the wastes of science, much less a region like this, to a proud and an ignorant scepticism : let us seize upon it all, in the name of Christianity : let us plant it, and work it, and mark it out, and He who giveth the increase, will assuredly bless our endeavour.

Appendix (b).

I cannot but subjoin the following observations connected with the theory of motion which I have ventured to propose, and with the whole tenor of the enquiry into the passive character of the intellect and mind. Whenever a question has for ages engaged the disputes of mankind, and no satisfactory solution has been obtained, we may at least suspect that we have been fighting for words; and such appears to be the case in our foolish discussions on those watchwords of party, free will, and free agency. I shall endeavour briefly to state what the meaning of these terms is: then shew the precise ground of dispute; then trace the circumstances which have led to a difference of opinion; and lastly, endeavour to prove, that if one party at least is not right, no mischievous conclusions can be derived from the opinions of either. The sense of the word action is evident. That of will is merely the mind willing. Our will moves our bodies, means in other words, the mind when in a particular state, which we call willing, moves our bodies. And this state we call in other language, a state of pleasure and desire; or their opposites, pain and aversion.—So that the human will is nothing but

the human mind in its susceptibility of pleasure and pain.

The word freedom is used in two senses. A man who reluctantly is carried away to prison, is not said to be free. He is under an external influence which acts not only independently of his will, but against it. Freedom in this sense means the acting according to our own inclinations.

The second sense of free, derived from the analogy of the preceding case, is that of a perfectly unbiassed, uninfluenced, independent, primary cause. And an action might be said to be free which cannot be referred to any thing preceding it.

To apply the attribute of freedom in its first sense to voluntary actions, (and with these alone we are concerned) is to use an identical, tautological proposition. If voluntary actions are those which are agreeable to, and flow from, the state of the will; and free actions are those which are also agreeable to it; free actions and voluntary actions are the same thing.—And the statement is just as absurd as to say that black is black, and white is white.

To say that our voluntary actions are free in the second sense of the word, is a self-contradiction: for a voluntary action is one which is supposed to

be dependent upon the will, and a free action is one which is perfectly independent of every thing.

Free agency, in the first sense, is a mere play upon words: in the second it contains an absurdity.

Let us next apply these two senses to the will. To say that our will is free in the first sense, is to say that our feelings of pleasure and pain, desire and aversion, are regulated by and agreeable to our feelings of pleasure and pain, desire and aversion. It carries us back one step farther, which having reached, the same question is still to be asked.

It is a palpable absurdity, and as I believe no one is anxious to contend for it, there is no occasion to shew its folly.

Free will in the second sense is the grand stumbling block in metaphysical enquiries.—The question is this : Does our will, or in other words, do our pleasures and pains depend upon any thing external to them or not ? Is the mind so subjected to the media of sensation, that is, to the body and the senses, that its movements and perceptions are, by an undeviating law of nature, regulated by them ? Or does it possess some instinctive, intuitive, mysterious, self-acting, primary power, of producing feeling and affection in itself, without any external

influence ; biassed by no law and subjected to no controul.

Now we must constantly keep in mind that our whole mental existence is a series and succession of perceptions or states, following one another, to use a very trite illustration, like the letters in the alphabet, A, B, C, D, E, F.—If the mind be an ultimate independent principle of motion, it will regulate this succession in one of the following ways.

It may, capriciously, instinctively, without pleasure, or object, or motive, call up at any time, any one of these perceptions ; bring itself, that is, into any state it chooses by a mere act of volition. And this volition, remember, is to be what it never can be until black is not black, an act perfectly independent of any pleasure or pain connected with the state to be produced. Now, that the mind cannot do this is allowed by the greatest metaphysicians. We may try, if we like, to do so in the case of a forgotten face, a line which has escaped the memory, or a commission which we wish to remember at a particular time. The common sense of mankind never trusts to such a power, but always recurs to the law of association and external impression. We tie a string round our finger, or beg some one to remind us. It is in fact a self-contradiction.

diction ; for to will, that is, to command the absent idea to return to the mind, it must already have made its appearance. It must be absent and present at the same time. A second way in which the mind might be supposed to act as an independent principle of motion, is this : If we could apply sugar to our mouth, and will to find it sour ; or put a hot iron on our hand, and will to find it cold. That is, if we could, by any internal decree, totally alter the influence of external objects on our senses. I would recommend any man who believes himself possessed of this power, to make the experiment : and I should wish the iron to be red hot, that his volition may be more excited, and consequently act with greater efficacy. — A third way in which our free agency might appear, would be the following. — We are free, it is said, to choose both good and evil. I will beg this free agent to put his hand into the fire, and burn it off. I will request him to choose a fortune of ten thousand a year, in preference to one of twenty. And he shall also make the experiment, whether, the option of death by hydrophobia, and a trifling operation being offered, he can choose the former. If he can, he is very differently constituted from myself. For these cases of choice are not free unless they are voluntary :

nor voluntary unless they are agreeable to our inclinations. And I should be very much perplexed if I was required to feel pleasure in doing that which at the same time gave me pain : that is, to be happy and miserable in the same moment, which is but another expression for the fact that we have the power of choosing between good and evil. It is really sickening to repeat this nonsensical play upon words. No man ever did or ever could choose evil for its own sake. If such a power ever was possessed by any human being, I will undertake to argue that there is no morality, no knowledge, no religion and no God as far as we are concerned.—The fact is, we do perpetually choose evil, not because it is evil, but because it seems good.

All men are open to the same affections of the mind from the same objects : but we severally see those objects in very different points of view. We stand before a picture, and one man pronounces it beautiful and another ugly. We sit down to table, and one man commits an excess, while another restricts himself to moderation. Not that the same colours, under the same circumstances, give pleasure to one, and pain to the other : or that either feels pleasure at a violent head-ache, or pain at the cheerfulness of health : or that, allowing a sameness in their

physical organs, the wine which is sweet to one is sour to the other. But because A contemplates one part of the picture, or one set of associations connected with it, and B looks at another. A sums up all the evils arising from intemperance ; B leaves out half the items, and consequently strikes a wrong balance.—Our bad taste in morals, in imagination, in manners, in every thing, arises from false calculations.—Put two men in the same point of view, and they will both see the same object in the same light. But from the same central point A runs off upon one radius of thought—B upon another.—Each strikes into his own direction, either by association, or external influence, neither of which he can alter, for the reasons before mentioned, because he cannot change the association till it has already appeared, and he cannot prevent his mind from being acted upon by that which acts upon it.

Bad taste is false calculation, when we leave out the items of evil which are mixed with the good. Good taste is right calculation, when we sum up impartially and fully. I can only say that if we assert the power of choosing between good and evil, as simple and elementary objects, we assert that which will and must destroy the whole fabric of morality, and truth, and religion, and sweep it

from its foundations. And I would willingly draw out such a principle into all the horrible conclusions which it essentially involves, were this the place for such a discussion. It might, perhaps, startle and terrify those who have offered to support it, not from a regard to truth, but from fear of mistaken consequences.

Nature has laid us under one primary law, which never varies in age, or condition, or character, the only universal law of our moral constitution; as the law of association is the only universal law of our intellectual processes. This law is our moral obligation, to which we are bound or obliged to conform, and to which we always do conform as far as we can, though from ignorance and absence of mind, that is, from not always having before us, what is ultimately good and ultimately evil, we perpetually violate its spirit: it is simply this, to do that which gives us pleasure; and involved in this, to avoid that which is painful. Of two apparent goods, to choose the greater, and of two apparent evils, to choose the less. Now if a man can act voluntarily, without obedience to this law, he is a free agent. But if the very expression of such a position is as ridiculously and grossly absurd as any self-contradiction, if we cannot escape from this law, I

cannot see what more right we have to call our moral actions free, than the stone free, when it falls to the ground by the law of gravitation. Not only this, but the instant an action is performed independent of this state of will, unbiassed by pleasure or pain; we remove it from the class of those which are termed voluntary, to which praise and censure, punishment and reward are attached. And we speak of it as done by chance, unthinkingly, irrationally, perhaps insanelly. To act with reason is to conform our conduct to this law, to be prudent in tracing consequences, fearful of rash decisions, correct in our estimates of good. But to act as an ultimate principle independently of our pleasures and pains, can never be made, and never is made, the subject of moral censure. It is not to act voluntarily, for then we act in conformity to this law. And praise and censure, punishment and reward, are attached to our states of will, that is to our inclinations and aversions, accordingly as they are regulated by a real and correct adjustment of consequences, calculated by the help of experience.

But it is said, if this sentient substance, our mind, be thus attached to a machine, which works upon it externally, affecting it by certain fixed laws which it cannot vary, and if this machine again is subject

to other fixed laws, which renders its operations equally dependent upon external influences, (and this is the real state of the case as it seems to me,) what is to be the effect of such a knowledge upon our moral responsibility, upon the activity of our lives, upon the dignity of our nature, and upon the two great attributes of the Deity, benevolence and justice. And how far will it lead us into those errors and mischiefs, which have been stamped as the opinions of Calvin.

Now the first thing really to be enquired is whether the position itself be a matter of fact, not whether its consequences are to our view mischievous or useful. It is indeed great weakness and worse than this, it is great wickedness, to tamper with the truth, or to close our eyes to it, even from motives apparently prudential. God has commanded us to search out the truth, and when the truth is made out he will take care of the results. Careful, fearfully careful we ought to be, when we are reasoning on any subject which may affect the conduct and opinions of our fellow creatures. But our only business is with truth, and if we will but venture on its pursuit with an honest zeal and confidence, without any bias, or any false motive, we may be assured we shall find it, and we may be even more assured that good must spring forth.

I do not expect to find one mind in a thousand, if I could ever imagine that this little work would meet with so many readers, which will give to the following observations this candid and honest consideration. We have all been beset from our childhood, by opinions and terms which have moulded themselves into all our prejudices and habits of thought, and can with difficulty be discarded. I do expect to find many, very many, who will turn from the whole subject as a dangerous speculation, which we had better permit to remain in the dark, and in which we have only to conform to the common language of mankind, that is of the party which surrounds us. I will only remind such persons, that mischiefs may arise from the concealment of probable truth, as well as from the publication of possible error; that there is a certain point in all reasoning, when we can no longer doubt, or conceive it possible for fresh light to alter our view; that if we shrink from examining openly and fairly the real state of the case, there are others perhaps with worse intentions, who have set themselves upon this work, and who have arrived precisely at the conclusion which has here been adopted, but have turned it to their own account. And I am sure no one who has ever shrunk beneath the awful responsibility of every human being, when

acting upon the minds of his fellow creatures, either in the way of example, or the communication of opinion; no one who has ever felt himself crushed, as he must be, into the dust by this tremendous reflection, will conceive it possible that the following conclusions are hazarded rashly, thoughtlessly, without a painful, an exquisitely painful struggle, to grasp the truth, and a full temperate and deliberate conviction that they are true, and useful, and necessary, perfectly consistent with all the dictates of our own hearts, and what is even more convincing, with all the statements of the Bible.

With respect then to the truth of the fact, I have endeavoured to shew that its supposition involves an absurdity, or at least a manifest contradiction to our own experience; and whatever statements have been made in words, mankind have always acted upon the belief that our minds are not free, that is, are not blind, capricious, independent, and ultimate principles; for our whole system of education, our common intercourse day by day, our whole fabric of government, our use of language, in short every single instance in which we communicate with the thoughts and feelings of others, all these are conducted upon the fact that similar causes produce similar effects, that what gives pain to day will

give pain to-morrow. Our notion of contingency, that is, our ignorance of the mode in which mind will be acted upon, is here indeed more common and more profound than in the physical world. But merely because there is infinitely greater difficulty in combining moral causes, and watching moral operations than in constructing natural phenomenon. No one ever did or ever will conclude that if we put the same mind in precisely the same circumstances, relatively to its body and associated ideas, it can run to-day into one course and to-morrow into another; any more than we expect that the fire which boils our water in the morning, will harden it into ice in the evening. If indeed it were so, what a frightful confusion would enter into all our conduct!

It is absurd to endeavour to escape from this result, by asserting merely a slight power of internal motion; for there is no degree of truth admissible in a self-contradiction, and the very moment an action is traced up to such a power, instead of becoming voluntary, it ceases to be voluntary, because it must necessarily be independent of any previous sensation of pleasure or pain.

Neither is it the least use to appeal to our consciousness, for consciousness can tell us nothing more

than that we are acting agreeably to our inclinations or against them, and if we look into our own mental operations, it will tell us most convincingly that we never do act voluntarily, except from feeling pain or desiring pleasure, or indulging an acquired tendency to motion, as in stretching out the hand, or walking without any perception of pleasure or pain, and solely from the idea recalling the action, and necessarily inducing it; this taking place by the law of association.

Let us now briefly see why mankind have been so ready to assert the opposite fact, and how they have been deceived. In the first place, experience is the source of all our knowledge. Before that experience is attained, every future fact is unknown to us. We stand, as it were, before two diverging roads, and cannot tell which we shall take. Where no external compulsion acting against our inclination is visible, we feel that we have the power, as it is called, that is, in correct language, we do not see any thing which prevents our taking one or the other. In all these cases, we say we are free to act, and assuredly we are so in the first sense of freedom. For if there be no external compulsion against our will, there is none.

The truth of the fact lies in the particular cir-

cumstances of each case severally.—We are only ignorant of any cause to bias us. Surely this ignorance cannot be alleged as a proof that there is none. A man rises up from his chair in the belief that his death that day is a contingency : but the person who has just given him poison, knows that he will die.—Is ignorance here a proof that no poison has been given ? Or is ignorance of the invariable laws which regulate our minds, or of affections which are about to take place in them, a proof that those affections will not take place, and that those laws will not act ?

Another false notion which misleads us is an erroneous estimate of our moral responsibility, which stands precisely upon the same footing, whether our minds are active or passive, motive or merely sentient, ultimate principles or but secondary links in the great chain of causes and effects. A man accidentally kills another : no one praises, no one blames, no one punishes him. There are two features in his case : one, the presence of an external agency ; the other, the absence of any depraved inclination. Of these two a general error has fixed upon the former as the essential reason why we abstain from punishment. Whereas, in all common sense, it is the latter. It is the depraved

state of the will, which by all moral government, from the very sense of the words is subjected to censure and pain : to censure, because our moral feelings are only conversant with the states of other men's wills and actions as the signs of that will ; to pain, because we have no right to apply it where it can do no good, and it never can do good unless it act upon and correct the inclination. The natural system of mingled pains and pleasures, under which we live, has taken a range of punishment infinitely wider than the mere will, and comprises actions and circumstances which are the result of ignorance, of chance, and even of the most opposite principles. Moral government, which is, I firmly believe, conducted with an unerring justice in this world, and is not merely to be fulfilled and rectified in another, is the application of pain and pleasure, solely with reference to the will. Whether the will be free or not, subjected to the action of the body, or perfectly capricious, is of no consequence whatever. All our moral responsibility, that is, our liability to good if our will be good, and to evil if our will be evil, all our expectations of a future state, and all the promises and threats of Nature and the gospel, remain untouched and unaltered by the passiveness or activity of the mind. It is a

truth so obvious that it almost seems ridiculous to dwell on it. But we have been misled here as in many other cases by the application of a false analogy. We pour water into the tea-pot when tea is in it, and find a very excellent beverage produced. And we then pour the same water into the same tea-pot, but forget the tea, and think the effect will be the same.

The second argument against the doctrine of mechanism is that it tends to the error of Fatalism, and generates inactivity through life : and it is a very lamentable thing that any men of superior reason should have been led to such false deductions solely by timidity and suspicion. Fate and necessity are words which mean nothing when applied to matters of fact. All the words in which we express shades or degrees of belief, merely denote the mode in which the two terms of the fact are connected in our minds.—A thing is necessary when the two terms are so blended that they cannot be separated. And this never takes place except in the actual present consecutiveness of ideas in our own minds, or in those mathematical truths in which we treat only of hypothetical definitions or signs, where the predicate is not connected with the subject but positively included in it. By the force of

language contingency is where we see no fixed connexion : possibility where we can admit it : probability where we have a tendency to admit it : certainty where we do admit it without any hesitation. Truth is applied to opinions when the expectations of our minds are gratified : falsehood when they are disappointed. Of any necessary, that is, inseparable, connexion between any two terms of matter of fact, we have no experience whatever ; and a future necessity applied to matters of fact is a contradiction in language, unless we can tell to a certainty what we have never experienced, or, in other words, know what we do not know.

To say, then, that a belief in the mechanical and passive structure of the mind leads to fatalism, is to say that it leads to a conclusion which is perfectly absurd. Surely we are not to deny principles without regard to their truth because men deduce from them self-contradictions. But fatalism, it is said, leads necessarily to inactivity ; and those who have asserted this connexion have made the egregious blunder of reversing the natural order of cause and effect. The notion of predestination and fate springs from indolence of mind, not indolence from the notion.—A man who is not inclined to act, whether the disinclination arise from the want of interest,

from present inconvenience, from repeated previous disappointment, or general recklessness and indifference of feeling, consoles himself like the Turk, with the belief that all things are fated. But once inspire desire or pain, sufficient to put the machine in motion, and motion follows of course. No reason could prevent a man from pulling his hand from the fire, if he wished it, and was not prevented. Nature works for him by an irresistible instinct. It is the apathy of the Turk which makes him a fatalist, not his fatalism which makes him apathetic. Another consideration urged against the doctrine of mechanism and unvarying laws, is that it lowers the dignity of our nature. I trust, to any one who has read the preceding pages, it is unnecessary to recall the real meaning of freedom, and why we consider it a good and a glory. In itself it is neither one nor the other, but perfectly indifferent. It is valuable solely in one sense: when we are free to act according to our inclinations, and in this sense all voluntary actions are free. But it is a very different thing to pronounce a power of moving, without motive or object, to the right or the left, of choosing evil or good indifferently, a blessing and a glory. It is to claim for man the privilege of unthinking, irrational, brute chance, and nothing more.

Another objection is, that it destroys all notion of merit : and that all notion of merit in the common acceptation of the word should be destroyed, is alike conducive to our happiness, agreeable to our reason, and essential to Christianity. If merit mean what it does in the minds of most men, a claim of justice and right upon certain compensations for actions, or feelings as produced independently of external influence, we have no right to assume a position which involves the whole question in dispute. And if merit mean what it only ought to mean, an expectation that certain states of inclination will be followed by certain pains and certain pleasures, this expectation being caused in us by the natural working of natural laws, the doctrine remains perfectly untouched, whether the inclinations themselves are primary principles, generated by their own self-acting force (for in combating nonsense it is necessary to tell nonsense) or are produced by the natural organization of the mind, and its connexion with the body.

All these, however, are minor evils compared with the seeming effect of these principles when bearing upon the attributes of the Deity. As a mere speculative question indeed, if our practice were no ways concerned, it would be just as much

a matter of indifference to any rational mind, whether the Being who created us was just or benevolent, as any of the absurd and impious questions respecting his nature, so common in what I am ashamed to call the Philosophy of the Heathens. It is only so far as our own actions and feelings are affected by the tenets, that we have to consider them. And if it can be shewn that pursuing the analogy of rational inferences in this world, we have no right whatever to pronounce the system under which we live not just or not benevolent, though viewed in its most repulsive light, as emanating wholly from the will of the Deity, and carried on by an uninterrupted succession of foreseen and fore-planned, connected influences, without any independent and separate principles of action in the human mind—if we can find individually, a certainty that it is benevolent, because our happiness is provided for—if, on looking into the laws of the human mind, we find ourselves irresistibly impelled to the truth which involves this conclusion, and when we open the Bible we there perceive it stated and laid down with a force and openness and repeatedness which no human ingenuity can evade without admitting principles of interpretation most dangerous to the honesty of our search—if we can then, pursuing

this truth to its very utmost extent, stop short, far short of the manifold absurdities to which it has been perverted, and prove that it is perfectly innocuous, and not only innocuous but infinitely salutary—if we can do this by a fair and impartial reference to acknowledged facts, we may venture, I think, to admit the principles, and defy the enemies of religion, whether within or without its pale, upon their own ground and with their own weapons.

On the benevolence, then, of any scheme of causes and effects, our own common sense and daily prudence tells us we cannot pronounce till all its results are visible.—We see a man suffering in prison, and our feelings are shocked at his condition, and offended at the persons who decreed it.—But let us look to the effects upon society, and we instantly are reconciled to the fact. We may continue to pity the offender, and endeavour to relieve him; but any thing like indignation at the authors of his sufferings is instantly annihilated. Let us only transfer to the whole scheme of Providence this simple and obvious analogy. Let us give our decision upon the benevolence of a Creator who has subjected us to a state of trial and sin and punishment, who brought us into being without our interference, who placed us in a state of in-

fancy, under the controul of external influences, without any interference of our choice, and who will nevertheless regulate our future fate by the effect of those influences on our minds—let us give, I say, our decision when we know the end, the object and the whole of this unbounded plan, and not before. And when our own sufferings are the subject of our thoughts, when we are less likely to reason with coolness, let us remember, even if we are sceptics, that an offer has been made to each of us individually, to place us in a perfect state of happiness, both in this world and the next. I am not now speaking of the evidences by which this offer is supported. But were they slight as a straw, instead of weightier than any which human knowledge possesses elsewhere, such an offer ought to be examined. We ought to see whether when it promises to relieve us from the state of suffering in which we are plunged, it really does contain the antidote which it professes. We ought to look into the nature of our feelings to imagine the best mode of fully satisfying our wants, and then observe whether or not this mode is to be found in the Bible. And if this analysis is beyond our reach, there is one common practical question which we put in all such cases, and which the poorest and

most ignorant can understand. We can judge correctly of the efficacy of a medicine by seeing it cure another. And it is very easy to go to any real Christian, not to a nominal one, and ask him whether he is happy, whether he ever repented of his faith and his prospect, whether he would change his condition, though that condition were a dungeon and a stake, for any thing which the world could give him. His answer may indeed be enthusiasm, and perfect happiness is enthusiasm ; but it is an enthusiasm well worth indulging, and well worth purchasing.

Christianity, indeed, real, full, genuine Christianity is the only remedy for the doctrine of necessity or mechanism, but it is a complete and universal remedy. And if it will not be received, the blood of him who rejects it lie upon his own head. Let it also be remembered that to the believer himself that wonderful and fearful skill (fearful, I say, because it so far surpasses all the imagination of human wisdom) which has constructed the scheme of Christianity as an adaptation to the human heart, has, by the most beautiful and delicate contrivance touched upon the only spring which soothes, and comforts, and checks our repinings, when suffering under inflictions ourselves. The same Being who created, and exposed us to this

state of frailty and error, came into the world, and suffered himself. If God appointed the sins of man, God also bore the penalty ; if God subjected us to pain, God was tortured himself. If he condemned us to the grave, he also went thither before us. And who shall then call in question the benevolence of such a dispensation, or ask, with a murmur, whether a better might not have been adopted ?

The question as it relates to the divine attribute of justice, is equally simple. Here, as before, we must ascertain precisely, first, what we mean by justice ; secondly, how far it is a virtue ; thirdly, how far a correct analogy will enable us to apply it to the Deity and his dispensations.

Like all our other moral sentiments, our feelings of justice are states of our own mind produced by certain circumstances in the social commerce of life. When we see any communication of good or evil from one man to another, we are liable to be affected with certain pleasures and pains. Where we feel pleasure we call the action good, where pain we say it is bad, or to use specific terms, we denominate it right or wrong, just or unjust. These feelings are the result of more than one complicated law in the human mind. The predominating element is the principle of sympathy, which is the spring of all

our notions on the subject of gratitude and resentment. Combined with other accidental sources of pleasure it leads us almost universally to be gratified with an equilibrium of good and of evil likewise, in the interchanges of life. A perfect analysis of all our moral sentiments on this subject would clearly demonstrate this : all, however, to be observed here is, that in this instance, as in all other moral principles, our primary and instinctive perceptions are caused by the simple or complex operation of those elementary laws into which all our pleasures of the senses, the imagination, the conscience and the intellect are ultimately resolvable. The pleasures or states of mind are the same in themselves, and differ solely in the medium through which they are produced. The pleasure derived from dancing and that from the study of Euclid are precisely the same. And the analysis might be extended through the whole range of our sensations.—Conscience is nothing but the feeling of pleasure or pain, which has thus been connected with particular actions ; and although from the natural conformation of our minds we are not often misled in our general principles, still we require perpetually to keep our hasty conclusions and sympathies in check, by following up consequences, and making more full and accu-

rate estimates of results. That to us is apparent good, which pleases us at first sight ; that is real good which pleases us when this process has been performed. In justice, therefore, as in every other virtue, we must look beyond our mere primary notions, and calculate the excellence of an action by its produce of good, or what is equally satisfactory as a test of reality, its accordance with the decision of a wise mind, these decisions being in general recorded for us in the Scriptures.—Now, in the case of the communication of good, both distributively and correctively, putting out of sight all feelings of affection, we find that a balance, or equilibrium, or equality, is both gratifying to our instinctive tendencies, and really productive of benefit. The former, because we are thus subjected to no loss ; the latter, because it is the best method of encouraging industry and exertion. In the distribution, however, of evil, the same natural approbation of equality and proportion between the evil done and the evil suffered is every where observable. In fact it springs from the same law of sympathy. But instead of finding that this apparent good is real good, when we look to the ultimate end of our being we find that we are sadly deceived ; that we have no right to regulate the infliction of

pain by any such principle ; that Nature has given us no power to produce pain unless for the purposes of good ; that when this pain is to be inflicted it must be made equal, not to the crime committed, but to the very lowest degree of suffering capable of answering the ultimate end of punishment, first in deterring others, and then in correcting the offender. And justice, therefore, in the distribution of evil is that proportion which best answers the object of all punishment. Nor is it in the slightest degree affected by the causes of that state of will to which it is applied. The will itself is the only point to which we ought to refer or do refer, because it is the only thing which we wish to correct or can correct by administering pain. Upon this principle Nature applies punishments to accidents, to ignorance, to venial neglect, even to the errors of virtue. And her system is perfectly just, because it is productive of infinite good in making us careful and vigilant. Moral punishment or pain applied to the will as a correction of its depravation, is administered by Nature in the same manner. There is no proportion observed, none necessary to be observed, between the guilt and the evil incurred. That we do instinctively desire such a proportion, is very true ; and we do instinctively desire to retaliate

upon our enemies, to hate them that hate us, and curse them that curse us—but instinct is here wrong, because it is not a primary and elementary law of Nature, but the result of other laws, which Nature has indeed put in motion, but which she has also required us to check and direct. The justice, therefore, of all moral punishment is to be decided by its effect in deterring from the commission of crime: it is, in fact, resolvable into the former question of benevolence—and can, like that, be only pronounced upon when the veil has fallen from our eyes, and we can tell what effect our creation and suffering may have upon the rest of the universe.—It is very easy to conceive what this effect may be, if we choose to reason upon the analogy of human affairs, and guide ourselves by the few scattered lights which seem purposely thrown at intervals over the scriptural allusions to this subject. We can also fully understand the advantages accruing to ourselves from having been made liable to sin, and liable to punishment. It is but another most beautiful contrivance for working upon the human heart, and bringing it to its perfect state of happiness. For we never could love God, or appreciate and delight in his greatness so much as when we are ourselves thrown entirely upon his

mercy, and placed in a situation to judge of his elevation by our own depression. And other objects connected with that kingdom which is to be established in another world, it also may have and seems to have. If we are there to be entrusted with power, employed in regulating the universe, or placed in any function of trust and honour, we can easily imagine, constituted as we are, how a previous discipline and a previous fall might be necessary to keep us from all pride, to soften and awaken our hearts, and to tie us all together in the fullest and most delightful dependence upon one supreme head. That such a system of government and subordination exists in nature, is a symptom that it will exist hereafter ; and then every thing becomes easy. But the subject is one too wide and too curious to be briefly entered on, and what I have observed, has, I trust, been sufficient to shew, that even applying to the divine system the analogy of human justice, that justice may be strictly observed, though the mind be perfectly passive, though its inclinations are the natural and necessary effect of a preordained system of causes, though punishment also fall naturally upon those inclinations, though no proportion whatever be observed between the guilt and the pain inflicted, or in its

relative distribution over numbers. And that even in the distribution of good, it by no means follows, that the equality and proportion which is observed here, should be necessary hereafter. For the real virtue of that proportion consists in its production of good. And there may be no analogy between the dealings of men among themselves and the relative operations of this earthly system upon the whole scheme of the universe—to render the same proportion necessarily conducive to the same result. We may be, and shall be, admitted into an immortal happiness, if our inclinations be what they should be. But immortal happiness can be no equivalent to our puny human excellences, even if self-produced ; and that they are not self-produced the whole tenor of the Bible, its most positive declaration, and the whole spirit and object of Christianity sufficiently proves. Here, then, is an instance in which our primary, natural sense of justice is counteracted at once. In the application of eternal punishment to all unbelievers to whom Christianity has been offered, however various, in their shades of depravity, it is again shocked.—In giving the same price to those who commenced at the eleventh hour and those who bore the heat of the day, it is again offended.—The whole subject is indeed

well worthy of the fullest and most profound investigation. We ought to examine the origin of our notions of justice and injustice ; observe how far and by what principles they are to be corrected ; and settle the whole system of right and wrong upon some sound and solid basis. It would, I am sure, throw a wonderful light upon many most difficult passages in the Bible ; and only illustrate in one more instance the supernatural knowledge of human nature possessed by the Being who formed it.—In the compass of a note, however, more cannot be attended to ; and I will only add, that I by no means intend to assert, either in the human or divine system, that equality and proportion in the distribution of evil and good will not be observed—but merely, that if observed, it will be so with reference to a higher object ; and its justice or excellence will depend upon its conducing to that object. Its maintenance may be right, its violation is not necessarily a wrong.

After thus endeavouring to clear away some of the principal obstructions in our way, let us next consider, from *a priori* observation, what we should say must have been the dispensation of God to man ; how such a dispensation accords with the analogy of the natural world : how it is described in the

Bible: and whether any absurdities of enthusiasm can be legitimately drawn from it. If the human mind is not an ultimate paramount principle of motion, but receives all its sensations from the workings of the body and an external world, if it be subjected in all its processes, both moral and intellectual, to certain invariable laws, the Being who framed that mind must have foreseen all the future stages of its existence. It is an absurdity to suppose even a human creature capable of enacting inviolable laws, and not capable of tracing all their subsequent effects and relations.

It is also self-evident that the natural working of those laws would throw out an infinite number of characters; some with certain features of excellence, and others equally depraved. And the Being who knows the result of his own laws, must necessarily know the individuals whom their operation would thus affect. It is also equally certain that the natural tendency of these laws is to produce an aberration from good; that such aberrations never can be corrected by any internal principle of amendment, any more than a watch can wind itself up, or clean out its own wheels when clogged with dust. These positions, I say, are evident, not perhaps from what has been here adduced, but they might

be proved by reference to the laws themselves. And for a shorter demonstration we need only look to the history of mankind, to the consent of the world, and to our own experience. If the machine thus disordered and disordered, (remember as we should naturally expect, and as we find it represented in the first chapter of Genesis) by an external agency, and disordered more and more the longer it continued to work, was ever to be repaired, it must here also require an external influence. That influence would require to be very powerfully exerted at first ; but exactly in proportion as the aberration of the machine became less violent, it would be less required ; till at last, mere natural causes, assisted by very slight and almost imperceptible checks and modifications, would be sufficient to regulate its workings with some kind and degree of correctness. It would be also natural to expect that no more external agency should be employed, than was absolutely necessary. That on the contrary, a remedial system, constructed and acting upon natural laws should be employed. This system must be one and the same to all the different individuals comprised in the general depravation. It would act upon them accordingly in very different ways and degrees ; exactly in proportion

to their degrees of corruption. To say that the Being who framed the laws and framed the remedy, knows not whom they will severally affect, is again an absurdity. And lastly, accordingly as the remedy was assisted by external influence, would be the tendency of the machine to that state of perfection, to which it was finally to be restored. It would, however, readily occur to all that a mechanism so constructed as human nature, so delicate and so frail, could scarcely be brought by any thing but a miracle, to its full and complete restoration. We should naturally anticipate that it might be advisable to destroy and reconstruct it upon the same plan, but cleared from its contracted taint : and if we could in any way imagine that by all this contrivance of creation, corruption, and partial distribution of a remedial system, consequent destruction and final renovation, any great end might be answered to other beings and systems : if we were placed within the reach of the remedy, entitled to its fullest application, blest even here with nearly a perfect restoration, and sure of one more perfect in another state—however we might lament for others, no practical harm could arise to ourselves. We should struggle, earnestly struggle, to place others in the same situation. But our natural feelings of

aversion, if repulsed, would prevent any sorrow for their fate, and their danger would only enhance our own gratitude and our own security.

Now, let us only look at the physical system of Nature, and observe whether it does not contain a very wonderful train of analogies, corresponding with these anticipations of our reason in the moral world.

Let us take a wood of trees,—all of them machines very artificially constructed for their own conservation and improvement ; liable, however, to decay, from external influences,—such decay being evidently foreseen, because we find them provided with an organization expressly contrived to remedy it. A drought comes on, and the trees begin to wither. Some of their fibres or sap-vessels are injured : the longer the drought continues, the more rapidly and extensively destruction advances. A shower however is brought on,—but partially : on some it does not fall at all ; on others only when too late to be of service ; and exactly in proportion to the extent of the mischief, will be its means of restoration. Even the trees which are revived, never entirely recover their original strength. External assistance, frequently administered by the hand of man, is necessary to renovate them ; and

they must be pruned or cut down, and will never spring up again in perfection, except from a fresh sapling. But the decay of these trees evidently conduces to the support of other animal and vegetable life. It is part of a grand system of destruction and renovation, in which to us the chief wonders are, the pains and wisdom lavished on the construction of mechanism, so liable to destruction, when that destruction is foreseen; and nevertheless its beautiful subservience to the general good. Now there is no difference between this system, in the natural and moral world, except that we are conscious of our own susceptibility of pleasure and pain, and are not aware of any such susceptibility in what we term brute matter. Our belief that other human beings feel, arises solely from our perceiving in them certain bodily changes, which, from previous experience in our own cases, we have ascertained to be the concomitants or signs of our own mental affections. These signs, and the organs which produce them, are wanting in other things; but we go very far beyond legitimate reason, when, from their absence, we positively assume the absence of sensation. A buoy is the mark of an anchor, but I cannot infer that where there is no buoy there is no anchor. And even supposing sensation

to be peculiar to ourselves, must we conclude from thence that the right or wrong, justice or injustice, of a system is at all affected by this peculiarity. Our sensation does indeed give us ideas of right and wrong. But it is no standard of real justice. The real justice of a system lies in its ultimate tendency : our notion of it lies in the mode in which it affects ourselves.

Let us now turn to Revelation, and we shall find it there asserted that God created the world, and laid his creation under laws, and foresaw all the operations of those laws ; and provided, before they were put into action, for the mischiefs to which they would lead, by planning the scheme of Christianity before the foundation of the world. We are told that external agency, acting upon a weak point in the constitution of the first man, brought him into sin ; that the taint thus admitted, rendered the total destruction of the machine necessary, in order to its future reconstruction : that by sin man became liable to death : that through successive generations, evil working upon evil, it rose to such a height, that it was necessary to sweep the whole race from the face of the earth : that a second reproduction took place from a single family ; and in order to provide for a more gradual demoraliza-

tion, its descendants were scattered over the world ; and some of them reserved, as if by a special Providence, in situations less liable to corruption, to be poured in at times, as we find they were poured in, as a corrective to the profligacy of the rest. It might be curious to see how often the principle of destruction has been acted upon in the scheme of human affairs, when correction of evil was the object. The case of the Canaanites, the inhabitants of the Roman empire, the West Indies and America, and almost all instances in which colonies have been introduced among a depraved race, are all referable to this law of Nature ;—but I mention it only as curious, not as an argument.

At a certain period in the history of man, we find a system of threats, promises, and doctrines, all bearing upon the human will, or, in other words, upon our pleasures and pains, introduced again by external agency ; promulgated by external agency, assisted in its effects upon the heart, by external agency likewise. The supernatural part of this agency, as might naturally be expected, was strongly exerted at first, when the counteracting tendencies were strongest : at the present day it works silently, (and imperceptibly, except in its effects) in repairing our injured minds. In the whole scheme of

Revelation, we find no mention of free-agency, or free-will, for the terms are an abuse of words, but we do find every possible remedy which man can imagine, for correcting our depraved tastes ; and every possible contrivance to work upon our pleasures and pains. There is no reference made to any ulterior course influencing the will, any more than there is by ourselves when we praise or blame, punish or reward, like or dislike, the moral character of others. We are told that we can do every thing if we will ; and every means is employed to make us will. We are told that we shall enter into certain states in another life, according to our wills. We hear of beings predestined to these states ; that is, of characters whom God foresaw would be struck out by the natural operation of his established laws ; and whose wills would be fitted to receive the antidote of Christianity. These men are spoken of as the elect, and are addressed by the Apostles as the elect, in the plain and most natural sense of the word, without requiring any artificial and far-fetched implication of their election as national bodies, or to certain prerogatives and privileges. They are addressed as the elect, because they would naturally seem to be so, if under the circumstances in which Christianity was first preached,

they received and acted up to it. Their conduct was the sign by which St. Paul judged of their being in the number who would be saved; and we may form our judgment by the same sign, but always with the reservation of human ignorance of futurity. No one individual could be considered sure of eternal life, nor any one body of men, without this condition—that the state of mind on which the inference was founded, continued the same. We hear also in many portions of the Scriptures, of wicked men created by God, for the day of his wrath, many allusions to the effect which the sufferings of some may have upon the conduct of others. A few gleams of light are thrown on a most mysterious subject—a rebellion in heaven; a faint and imperfect sketch is thrown out of our lot in another world, that is, of the end for which we were created: and this lot is laid in a kingdom, and we are spoken of as entrusted with powers, even as judging angels; and when we look into our own hearts, we can easily conceive, why, constituted as we are, it may be highly necessary for our conduct and happiness both in this world and the next, that we should have been brought down to humility, and awe, and faith, and love, by previous exposure to sin. We know that we never

could love God so well as when we looked to Him for pardon on repentance, without any merits of our own. We are told that the pain which the natural system of things would lead us to anticipate for our offences, was endured for us by the same Being who created us: and such a proceeding is perfectly accordant with what we should expect; perfectly just, if the justice of punishment lies in its effect upon others, and Christ's death affects the rest of the world, to deter them from offences: and it is also perfectly necessary to our salvation, whether we look upon it as an atonement in the common sense of the word, or as placing before us an object to fill our affections and purify our hearts; the only object, in fact, in the only circumstance which could thus operate upon us. We are told that God was the great first cause of all things, and yet that man was the cause of evil: and there is no doubt that man was and is the cause of evil, in the only sense in which as rational beings, speaking of moral subjects, we use the term cause; for we never trace up the chain farther than the will of the agent, and there we stop. We are treated in the Bible as free agents, in the first and common sense of the word free,—that is, as being under no external influence to induce action con-

trary to the will: all the threats and promises of revelation are addressed to our inclinations, and intended to change and correct them; but they imply nothing farther, and leave the whole question of the independence of the will perfectly untouched. We can do it if we will, is the language of common life, of civil jurisprudence, and of divine legislation; but the condition is always implied and expressed, and a fact which is subject to a condition, can never be called free, while the word bears any meaning. What then is the business of the Christian preacher? Is he to give up his endeavours to convert others, or will he work with tenfold earnestness when he believes that there is no arbitrary, capricious, independent principle in the mind, which can controul the will, and engender pleasures, and pains, and resolutions, of itself? when he feels that he has to bring the mind into its proper state, by his own arguments, by placing the object to be aimed at in all those lights in which it may strike the proper string, and excite the proper conduct? Will he venture to address any one as elect or reprobate, farther than as he can decide upon the state of their affections? Will he not assure every one that the very certainty of salvation may be an indication of its contingency,

and the very fear of eternal ruin a mark that all is not lost ? Will he not be very strenuous in guarding against all external influence, very urgent in warning others of their exposed and dependent situation ? Who will crave so ardently for supernatural assistance as those who feel themselves subjected to laws which they cannot controul ? who will so fearfully avoid every possible contamination of wrong ? who will be so humble in their judgment on themselves, so indulgent and compassionate for others, so grateful for the succours which they receive ?

Many other observations might be made, still farther to show how miserably we have abused the term free, in its application to the human mind, and how completely the doctrine of an independent self-acting principle is opposed to our every day practice.

We say that the love is not worth having, which springs from mechanical influences : but our whole labour in friendship is by the means of natural causes, so to bind down the affections of our friends, that they may lose their freedom, and never be able to forsake us.

We say that God must delight in the service of free agents, and yet we never delight in any

thing but the affection and attachment of those around us, without caring for the causes which produced them.

We say that if we possessed no such primary capricious spring of action, cases may occur in which between two equal counterbalancing attractions, we never should act at all : and the real fact is, that no such case can possibly occur, because ideas pass through the mind consecutively, and we never can be placed in a situation in which mere priority of time will not give the preponderance to one or another.

We say that this scheme makes God the author of evil ; and I answer, that God is the author of every thing ; that evil is a relative term, applicable only to ourselves, and we know not what is evil in its real and intrinsic nature.

We say that if the momentous concerns of life are regulated by our will, that is, by our pleasures and pains, in the trifling occurrences of the passing hour, we do exercise a power independent of them ; and I answer that no voluntary actions can be independent of our pleasures and pains, till the same thing can be and not be ; and that if this independent principle be essential to moral conduct, our

moral conduct is to be seen only where it is found, and consequently by the very allowance of its assertors, only in the most trivial and insignificant actions—in the one-millionth proportion of our whole lives.

We say that it is not benevolence in God to pre-ordain our fall by a foreseen connection of cause and effect; and I ask if it be greater benevolence to make us liable to fall? whether the mother who places her child upon the precipice, knowing that it will tumble, or one who places her child there in order that it may tumble, but for some good purpose, is more worthy of our affection and respect.

But I have already exceeded the compass of a note, and nothing but the serious charges which have often been brought against the opinions here advocated, could justify so long a discussion. The question must be left to each individual to answer, and we shall only then have done our duty, when we have resolved to look the truth in the face, and not be driven from it by prejudice or timidity, or, what is still more likely, the fear of reprehension and disgrace.

Appendix (c)

It may not be unimportant, for many reasons, to ascertain precisely the meaning of the terms, unity and identity.

Our notion, then, of unity is derived not from the real and actual unity of a thing, for it is an idea not immediately derived from the senses; but flows first from the unity of the mind itself, and secondly from one of its complex operations. Nothing can be one to the eye, since all objects of vision are contiguous to each other, and it depends on the arbitrary action of the mind, to cut up that extended plain, which is pictured on our retina, into different portions, by checking its continuous perceptions, with the assistance of those lines of light and shade with which nature has pencilled it out. But a sound, or sensation, or taste, or smell, or colour distinct from figure, is to us one idea; that is, it separately and distinctly occupies the mind, it is perfectly indivisible into successive sensations; and is, in fact, the mind itself in one state. And that groupe of qualities or attributes, is also one, which the mind in perceiving, runs over one after another, anticipating the second before the first is over, till it has passed through them all, and possessing no other from association or perception, to add to the list, it comes, as it were, to a full stop,

and shuts up all these ideas into one case. And it is from this power which the mind has of stopping where it likes in running over ideas, of cutting off the connexion between them, and considering each separately, that we derive, as was before observed, our infinite number of abstract substantives. The terminations of these abstract words serving as so many hints to us to break off the ideas contained in them, from the other ideas which we had usually added on to them. And though from the natural tendency of the mind to pass on as usual to these consecutive states, there is a great effort and difficulty in detaching them, and consequently great confusion in the abstract idea ; particularly as, from the restless nature of the mind, we cannot keep it an instant in one state, and consequently cannot steadily contemplate this idea ; still, notwithstanding the ridicule which has been thrown on the doctrine from confounding it with the belief of abstract and real existences, it does appear that we have such things as abstract ideas though difficult to attain, momentary in their existence, and confused in their perception. Of course the more universal the conjunction of two states of mind has been, from the primary law of association, the more difficult it is to separate them : and hence the extreme effort of separating the notion of colour from space, and of figure from

extension. But that even this last is momentarily, and by an effort possible to the mind, may, I think be proved by an argument, which, though not metaphysical, or perhaps quite adapted to the nature of the subject, may perhaps be worth stating. It is quite certain that we should never be commanded by the Deity to perform a process which is impossible. But we are commanded by revelation to form a conception of the Deity invested with all the qualities which we find universally combined with figure, and extension, and colour, and yet to detach this conception from all such associations.

The extreme difficulty of doing this has perhaps been the first cause of idolatry in all ages of the world : and it is not the least beautiful contrivance in the scheme of Christianity, that all this difficulty should be avoided, without risking any of the innumerable mischiefs which flow from degrading the Deity into forms of our own imagination.

With respect, however, to the whole doctrine of abstract ideas, we ought to remember that we very seldom have any ideas at all in our minds, distinct from external impressions, but those of words. It requires great concentration of thought, a total exclusion of external objects, strong previous affection of the organs, and an attention very painful and continued to call up any idea of the kind.—Words

and sounds are the ideas which principally occupy our mind both sleeping and waking. And if we try to resuscitate distinctly the image of any object, however well known and strongly infixed in our memory, we shall soon be convinced of the difficulty of the task. Probably most of the beautiful creations of sculpture and painting have arisen from efforts of this kind—but they are neither natural, nor common, nor easy.

The perception of identity necessarily implies the recognition of an idea or succession of ideas now present in the mind, as having been previously present. It implies also a comparison between them: and the notion appears to be acquired in this manner. Whenever the sight of an object has once called up in my mind a train of ideas, if, the next time I perceive one of these ideas externally, I find all the successive ones which I anticipate, satisfied and fulfilled, as I recognize the object by the anticipation of its qualities, I acknowledge its identity by finding those anticipations gratified.— If, on entering a house, I anticipate a particular suite of rooms, furnished in a particular manner, and following in a certain succession; and connect these ideas with the idea of some other time and place not then present, I recognize them as a recurrence, not a first perception. And when I find them occur-

ring as I anticipated, I conceive the house which I am now in to be the same with the one which I was in before. When, however, any external object occurs to break the chain, I doubt its identity, and the more frequently this takes place, the more I hesitate. Hence the reason why the word sameness is used so vaguely—since it is difficult to say precisely how many recurring ideas must meet with a corresponding external impression to constitute that degree of similarity which we loosely denominate sameness, and the one more or less can scarcely be defined. One thing is evident, that we can never perceive two objects which produce precisely the same train of ideas in our minds, since there must always be a difference in point of time. The identity of an object is however determined by the uninterrupted succession of external impressions up to that point where our notion of the substantive ceases, and place or action is seldom if ever taken into consideration, except when two trains of ideas, the one present, the other repeated from a past perception, exactly correspond; and yet a difficulty arises in the mind at conceiving their identity, from the improbability of the object being transferred from one place to another, either at all or within a particular space of time; or from our not having watched connectedly its progress from one point to

the other. If I see a church in Italy which calls up a particular train of ideas in my mind, and on going into Germany, I there see another which produces the very same ; that is, which before I enter, I could fully describe ; and when I enter, I find precisely to answer my expectations : supposing I could for the time believe myself in Italy, I should have no hesitation in pronouncing the two churches to be the same, to be actually one ; or in other words, the two trains of ideas to be called up by one and the same object. The instant, however, that I perceived myself to be in Germany, as churches are not endowed with the property of locomotion, excepting the one at Loretto under very peculiar circumstances, my conviction of the identity of the two objects would be instantly annihilated. If, however, I meet a man in one street at twelve o'clock, and a man precisely like him in another street at five, I do not at all doubt their identity ; since though one link in the chain is different, still I can easily imagine how that may take place. Neither, if he appears in the morning with a brown coat, and in the evening with a blue one, does this excite any doubt. Whereas if he had but one leg at twelve and two at five, I should be privileged to hesitate in acknowledging him as the same person. Again, wherever I can trace a

substance gradually proceeding from one place to another, or even from one state to another, I conceive it to be the same at the end of the process as it was at the beginning. In the former case, because I not only conceive it possible that the place of the object may be changed without its substantial qualities being altered, but have the evidence of my senses to prove the fact; and the habitual practice of detaching the notion of place from my train of ideas, to assist me in doing so at last.—And, in the second place, upon two principles, according as fresh qualities are added, the previous ones still remaining, or the original ones are gradually detracted. Since the mere addition or subtraction of a single quality, particularly if that quality be slight and ineffective, scarcely induces me to consider the object as different.—And hence it seems that we attain our notion of personal identity.—1st. There are a certain number of attributes: such as features, dress, external parts of the body, which we naturally contemplate as parts of ourselves. Our notion of ourselves being very complex, instead of abstract, as some conceive, and embracing a much greater number of attributes and relations than any other word. And as we find these ideas recurring together per-

petually though in different situations, we are accustomed to consider first the object which produces them as the same, and those different situations and relations as merely accidental to them. And again, as the change which takes place in these ideas is very gradual, so that we do not perceive it, we scarcely discover any difference between ourselves to-day and ourselves yesterday, though that difference continuing from day to day, at the end of ten years a total change may be effected in our characters.

Such appears to be the origin of the vulgar belief in our personal identity. To account for the philosophical belief, abstracted from all consideration of our external attributes, is more difficult, but may be attempted on the same principles. If I see a lump of wax pressed into a round figure, and immediately after, pressed into a square, and then into a triangle, still I have no hesitation in saying that the wax is the same. And though I find my mind, that substance, whatever it is, which is, strictly speaking, myself,—at one moment, angry; at another, sorrowful; at one instant, in that state which I denominate the idea of a tree, and at another, in that which I call a house, still I conceive that mind to be the same unaltered substance

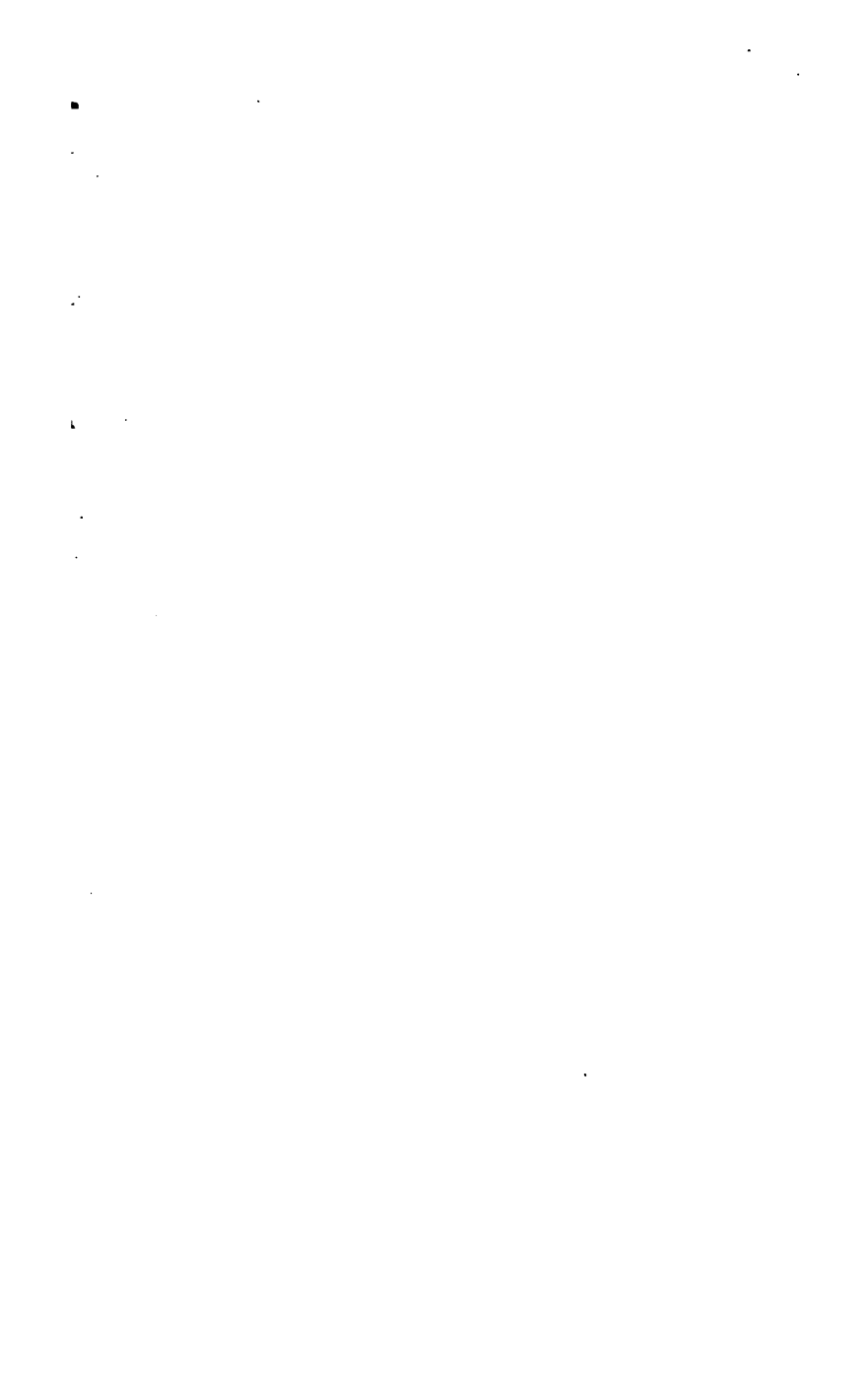
though in all these different states. Now, supposing that after having contemplated the square mass of wax, I had closed my eyes, and on opening them again, had perceived a round or triangular mass instead of the square; I should, without doubt, hesitate as to the identity of the substance, a fact which will be more clear if we conceive these masses to be metal, or any other substance whose shape is not easily modified. But, if my eyes had been open the whole time, and I had witnessed the transition, the gradual transition from one state to another, my belief in its identity would not be shaken in the least. And thus it is that our belief in our own identity results from our consciousness when passing from one state to another; so that if it were possible for our states of mind to succeed one another, with a perfect interval of suspended consciousness between them, we should have no such belief at all; and, in fact, such belief does not exist in the case of recalled events, which we are unable to link with our present ideas.

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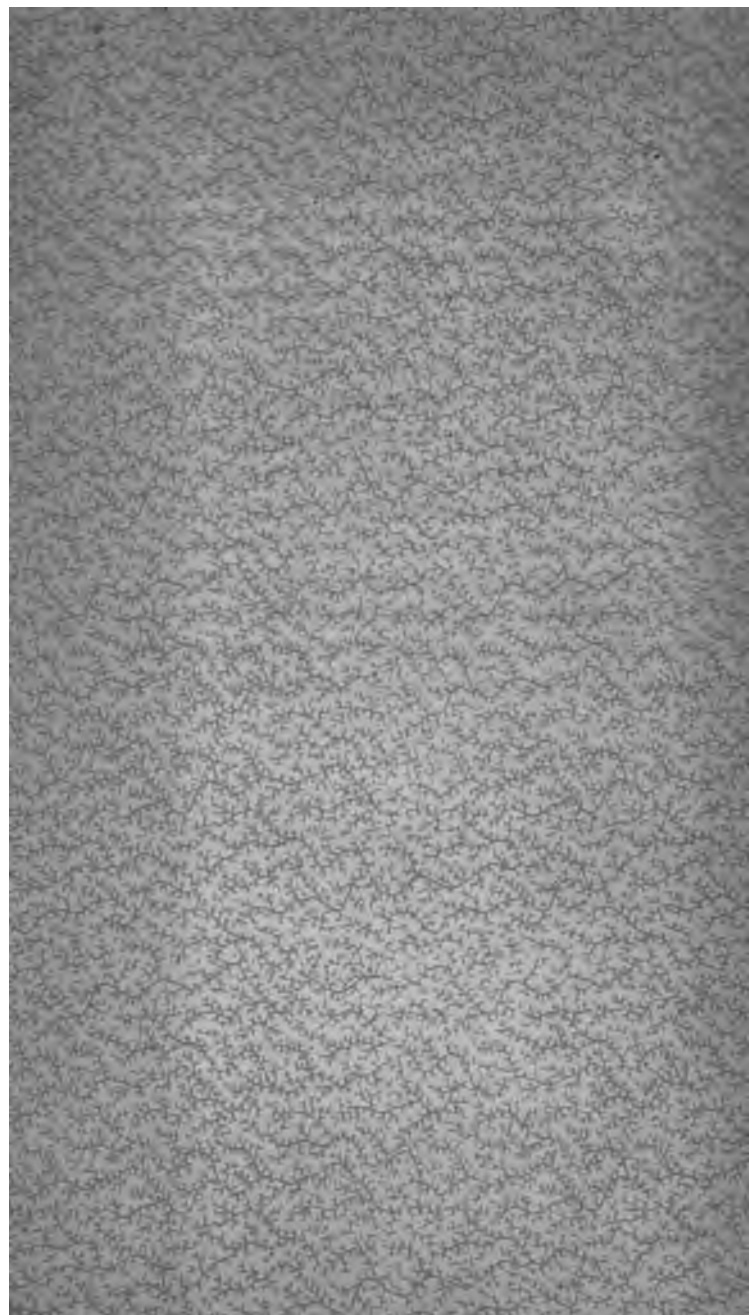
1. The first part of the document is a list of names and addresses of the members of the committee.

2. The second part of the document is a list of names and addresses of the members of the committee.









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